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KENTUCKY ECONOMY
Review & Perspective

THE KENTUCKY COUNCIL OF ECONOMIC ADVISORS
University of Kentucky, Lexington, Kentucky 40506-0034

September 1983
Vol. 7, No.3

KCEA Review and Forecast

by Charles W. Hultman*

The lower turning point of the U.S. business cycle—the trough of the recession—has been identified by the National Bureau of Economic Research as occurring in November of 1982. The Bureau has responsibility for dating business cycles based on its assessment of a number of indices of aggregate economic activity, several of which reached a lower turning point in November; these included the index of industrial production, the number of employees in nonfarm establishments, and the insured unemployment rate (inverted). Since that time most national indicators have reflected a favorable trend and the economy appears to be on the way toward slow but certain economic recovery.

The November cyclical trough at the national level also appears to apply to Kentucky although only a relatively few economic series are available for comparative purposes. In any event, certain key seasonally adjusted monthly series for Kentucky do indicate cyclical lows during one of the last two months of 1982; these include total nonagricultural wage and salary employment and both the total and insured unemployment rates (inverted).

Recent developments. Of central importance for analytical purposes are the responsiveness of the Kentucky economy to national developments in recent months and expectations for the next several quarters. At the national level, using seasonally adjusted data, real Gross National Product (GNP), after declining 1.9 percent during 1982, increased at an annual rate of 2.6 percent during the first quarter of 1983 and a very substantial 9.7 percent during the second quarter. The GNP growth was prompted by a significant increase in consumer spending for automobiles and other durable equipment as well as in house construction. Inventory expansion also contributed to general economic recovery. The employment picture, however, has improved more slowly. The civilian unemployment rate, which peaked at 10.8 percent during the fourth quarter of 1982, declined to 10.3 percent and 10.0 percent during the first and second quarters of 1983, respectively.

Although Kentucky data for the past three quarters are more limited in coverage, there is evidence that the state economy has lagged behind national growth. At the national level, the recovery in housing commenced in late 1981, as reflected both in terms of new permits and housing starts. In Kentucky, residential construction declined more sharply in the late 1970s and early 1980s than in the nation; evidence from construction employment and house construction permits suggests a somewhat later upturn in residential housing production in Kentucky.

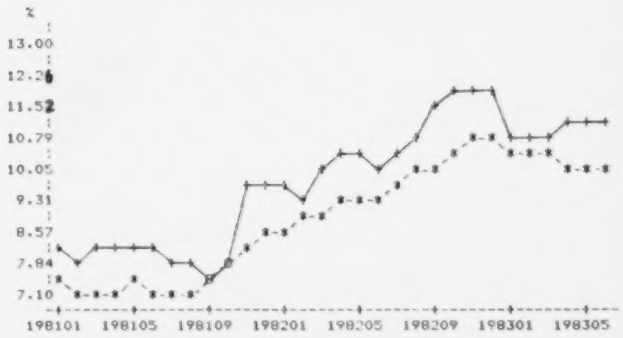
Another reflection of the Kentucky situation pertains to the total civilian labor force, which was almost 2 percent lower at the end of the second quarter of 1983 than the equivalent figure for 1982. Although employment in many sectors at the end of the second quarter of 1983 was improved over the first quarter of 1983, it was still below the comparable quarters in 1982. Kentucky's unemployment rate also suggests that recovery in the state has not matched the national economic growth (see Figure 1). Both the

(continued on page 6)

FIGURE I

COMPARISON OF US AND KENTUCKY UNEMPLOYMENT RATES, SEASONALLY ADJ.
(BASED UPON CIVILIAN LABOR FORCE)

LEGEND: SYMBOL FOR U.S. UNEMPLOYMENT RATE : *
SYMBOL FOR KENTUCKY UNEMPLOYMENT RATE : +



SOURCE : BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR & KENTUCKY CABINET FOR HUMAN RESOURCES. DATA HAVE BEEN RETRIEVED AND PLOTTED WITH PROGRAM DTP OF THE KENTUCKY ECONOMIC INFORMATION SYSTEM (KEIS). KENTUCKY DATA WERE SEASONALLY ADJUSTED BY USE OF PROGRAM X - 11 , AND ARE STORED IN THE KEIS.

Charles W. Hultman is Chairman of the KCEA and Associate Dean for Research and Extension, College of Business and Economics, University of Kentucky.

Our apologies to regular readers of *Kentucky Economy: Review & Pespective* for the delay in the appearance of this issue. A combination of factors stymied our best efforts to produce it according to schedule. One positive result however, is that all data published herein have been revised at least once by the relevant source agencies. A comparison of the revised figures with the preliminary data generally reported by the media, gives ample evidence of the dilemmas regularly faced by economists. In addition, readers will note that several of the authors in this issue use comparable data to analyze aspects of the Kentucky economy; nevertheless they formulate, present, and conclude their analyses in an original manner. To a considerable extent the divergences are in degree and not in kind, giving healthy evidence of the absence of certainty in the field of economic analysis.

* * *

At its meeting this fall, the Kentucky Economic Association presented Dr. Charles W. Hultman, Chairman of the Kentucky Council of Economic Advisors, Associate Dean for Research and Extension, and Professor of Economics, College of Business and Economics, University of Kentucky, with its annual Economist of the Year Award. We join in congratulating Dr. Hultman upon receipt of this recognition of his contributions to an understanding of the Kentucky economy.

* * *

Revised estimates of annual disaggregated Kentucky personal income, 1977-1981, and comparable statistics for 1982, have recently been issued by the source agency, the Bureau of Economic Analysis of the U.S. Department of Commerce, and are accessible through the Kentucky Economic Information System (KEIS).

Users of the county database of the KEIS, the CBANK, will be happy to know that Roy Sigafus, KCEA analyst/programmer, has been creating ways to make access to CBANK data more "user-friendly." Persons on the KECNET system whose CJS userid has been authorized to access any of the KEIS EXECS, can take advantage of the new CBANK EXEC by typing in:

```
.cbank info
```

anytime they are logged on the CJS. A similar "user-friendly" mechanism to access CBANK data will be installed on the state government version of the KEIS soon. For further information about any aspect of this development, please call Roy Sigafus, 606-257-7675.

* * *

Frances Ross, KCEA Data Analyst, represented the Center for Applied Economic Research, and hence the staff of the KCEA, at the industry/university research symposium, "Research: A Partnership" held at the University of Kentucky on September 27, 1983. Ms. Ross also spoke on the KEIS, and particularly on the coal-industry data available within that resource, at the Workshop Meeting of the Coal Information Network, October 11, 1983, at Morehead State University.

The office of the KCEA staff is scheduled to be moved later this fall to the Mathews Building at the University of Kentucky. Please keep this in mind when trying to contact us during November or December. Details will follow in the next issue.

—moa—

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KENTUCKY ECONOMY: Review & Perspective

Published quarterly by the
Kentucky Council of Economic Advisors (KCEA)
451 Commerce Building, University of Kentucky
Lexington, Kentucky 40506-0034 (606) 257-7675

ISSN 0270-1421
OCLC: 5289744

This publication provides current information concerning the Kentucky economy. It is a forum for the publication of short expository articles, analyses of some aspect of the Kentucky economy, forecasts of the Kentucky economy, and tables of selected data chosen as indicators of developments in the Kentucky and national economies. The publication also sometimes includes information about enhancements to the Kentucky Economic Information System (KEIS) and articles dealing with information systems in general.

Articles submitted for publication should be sent to the Editor at the address given above. All submissions will be reviewed independently by persons recognized as knowledgeable in the specific subject discussed. However, the ultimate responsibility for content rests with the author.

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Editor: Margaret O'Neill Adams. Publication Staff: Shearle Furnish, Mark Lunn, Yee Ling Mui, Frances E. Ross, Roy A. Sigafus, Dorisa A. Slaughter, Elsie M. Youmans. Printed with state funds at the Printing Services Department, University of Kentucky.

The KCEA is a state government agency, staff support for which is provided by the Center for Applied Economic Research, a unit of the Office for Research and Extension, College of Business and Economics, Univeristy of Kentucky. Richard W. Furst, Dean of the College of Business and Economics.

Another Look at Equity vs Adequacy in Kentucky Taxation

by Don M. Soule*

Some Problems of Equity and Adequacy in Kentucky's State-Local Taxation, published in February 1970, examined Kentucky tax problems from the point of view of a lower income state.[1] That study examined the conflict between: (a) the desire to relieve lower income families of tax burdens and (b) the inability of a lower income state to provide adequate governmental services if too large a portion of its population is given tax relief. In order to provide needed governmental services, Kentucky had legislated a 3 percent sales tax in 1960 and raised the rate to 5 percent in 1968. But by 1970, the state had begun to experience improved economic conditions, and proposals were being aired to make downward adjustments in various taxes. Economic conditions continued to improve in Kentucky until about 1978, and many modifications were made in the state's tax system during that period of rising economic conditions and expectations.[2]

Since about 1978, however, the Kentucky economy has declined relative to national averages; in addition, both Kentucky and the nation have suffered two recessions in the early 1980s.[3] Kentucky's personal income per capita increased from 78 percent of the national average in 1970 to approximately 83 percent in the period 1974-77, but declined to an average of slightly above 80 percent in the period 1980-83.[4] The net result, therefore, is that Kentucky has lost some of its previous economic gains and is again finding it difficult to finance governmental services.

This article reexamines the equity vs adequacy problem by summarizing the main points of the 1970 study, relating those points to the tax system changes of the 1970 decade, and briefly listing Kentucky's tax options.

Main Points of the 1970 Study

1. Regressivity in the distribution of state-local government tax burdens was decribed as a normal condition that existed almost without exception among the fifty states. (By regression is meant that dollars of tax burden, expressed as percentages of household income, are larger for lower income than for higher income households.) A more elaborate justification of regression was based upon observations that state-local government expenditures were for goods and services that generally resembled necessities rather than luxuries, and that household income-expenditure studies show that expenditures for necessities generally are a higher percentage of income the smaller the household's income. The final point was that, in order to raise a particular amount of tax revenue per household, on the average, lower income states must use higher tax rates or use a larger number of tax types because taxable values are lower, on average, per household.

The net result of the discussion of tax burden regression was the conclusion that the granting of tax relief to lower income households is especially difficult to finance in a lower income state. Such a state not only has lower average levels of taxable values per household, but also is likely to have either, or both, a larger-than-average percentage of lower income households or a smaller-than-average percentage of higher valued taxpayer units (households with higher income or businesses with large taxable values).

2. Kentucky's state-local tax system was found to have a less regressive distribution of burdens than the average for the fifty states.[5] A regressive distribution of tax burdens is commonly interpreted as placing a too-heavy tax burden on lower income households. Therefore, Kentucky's favorable (less regressive) position among the states in distribution of state-local tax burdens was suggested as possibly indicating that Kentucky was already granting a greater-than-national-average degree of tax relief to lower income households.

3. Additonal tax relief to lower income households, if such were desired, could most efficiently be given in a manner to exclude households whose incomes placed them outside the lower income definition. Two tax relief measures being discussed at that time were the homestead exemption (partial property tax exemption for older homeowners) and the exemption of food and prescription drugs from the sales tax. In both cases, these exemptions would give tax relief to both lower and higher income households. Alternate methods were suggested in the study whereby tax relief could be incorporated into the system of individual income taxation (credits, refunds, and direct payments). With any of these suggestions, tax relief would be given only to lower income households and according to the degree of income inadequacy. These methods could apply to both the property and the sales taxes.

4. Additional tax revenue, if needed, could be collected from a general tightening of the tax system by raising too-low rates and eliminating unnecessary exemptions. Specifically discussed were: (a) the very low rate of tax on sales of cigarettes, (b) the low tax rates on alcoholic beverages (combined with artifically high "fair-trade" prices), (c) the deduction of federal income tax before computing taxable income for the Kentucky income taxes, and (d) the low level of state and local property taxation in Kentucky relative to the fifty state average. (Because the coal industry boom had not yet occurred, specific suggestions were not made for coal taxation although some aspects were discussed.) Kentucky could raise additional revenue from adjustments in these various areas of taxation, with the additional revenue used to raise the level of services or to

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TABLE 1

MAJOR TAX LEGISLATION IN KENTUCKY, 1970 DECADE

Year	Legislation	Description
1970	H.B. 442	Implemented farmland preferential assessment program
1972	H.B. 162	Implemented the property tax homestead exemption
	H.B. 337	Exempted "grocery store" food and prescription drugs from sales taxation
	H.B. 337	Increased the *effective* rate of the corporate income tax
	H.B. 337	Enacted the coal severance tax
1974	S.B. 179	Exempted pollution control facilities from most state and local taxes
1976	H.B. 172	Exempted repair and replacement parts on farm machinery from the sales tax
	H.B. 677	Increased the coal severance tax
1978	H.B. 12	Exempted certain purchases by farmers from the sales tax
1979	H.B. 43	Exempted residential utility bills from the sales tax
	H.B. 44	Limited state property tax revenue growth from real property to an annual rate of 4 percent, unless approved by the voters

Note: As part of the modifications in the state-to-local school aid (Minimum Foundation) program, H.B. 4 (1976) reduced local school property tax rates by 30 cents (per $100 of assessed value), raised the state General Fund property tax rate by 30 cents, and increased to 100 percent the state's share of the cost of the minimum guaranteed level of school expenditures. While these changes had little immediate effect on total (state plus local) property tax rates, the statistical record showed a substantial increase in state property tax revenue in fiscal year 1978. This possibly influenced the legislature in making downward tax adjustments in the 1979 special session.

SOURCE: Kentucky Department of Revenue, *Annual Report*, 1970-79, various issues.

provide tax relief in a manner that excluded households defined as not having low income.

Tax Changes in the 1970 Decade

Table 1 summarizes, by date of adoption, the several tax changes of the 1970 decade. These changes are also summarized below according to tax types:

A. Property taxation.
   1. Preferential valuation of farm land (1970)
   2. Homestead exemption (1972)
   3. House Bill 44 to reduce the relative importance of property taxation (1979)

B. Sales taxation.
   1. Exemption of groceries and prescription drugs (1972)
   2. Exemption of various business purchases (1974, 76, 78)
   3. Exemption of residential energy utilities (1979)

C. Coal taxation. Severance tax adopted (1972); rate increased (1976)

D. Corporation income taxation. Disallowed deduction of federal income tax but reduced tax rates (1972). This resulted in a slightly higher yield.

Viewing these tax changes together with those of the 1960 decade, three phases can be identified. First, the major increase in reliance on sales taxation during the 1960s reflected Kentucky's poor economic situation in that decade. Second, the retreat during the 1970s from high dependence on sales taxation, plus reductions in property taxation, were financed from revenue produced by a booming coal industry and the coal severance tax (1972 and 1976). Third, additional sales and property tax reductions (1976-79) were financed from the relatively more abundant tax revenue provided by a much improved Kentucky economy, although the 1979 reductions probably were enacted before it was recognized that Kentucky's economic improvement had subsided. In the relatively depressed early 1980s, therefore, Kentucky has a tax system that was modified to suit a period of improved economic conditions and rising expectations. If the tax changes of the 1970 decade could be reconsidered, it would be instructive to evaluate those changes in terms of problems created for the 1980s. The main problems concern the degree to which the tax bases were reduced, and the degree to which instability of revenue yield has been increased, because of the tax change choices.

The two major sales tax exemptions (groceries and prescription drugs, and residential energy utilities) exempt these purchases for households of all income levels and therefore are more costly in revenue yield reduction than if the tax relief were only for lower income households. Much the same is true of two of the property tax changes (partial exemption of homesteads, and preferential valuation of farmland). An alternate method for giving tax relief would be to reduce tax burdens only of households whose incomes are sufficiently low to justify tax relief and to tailor tax relief according to their degrees of income inadequacy. Such tax relief measures could be incorporated into the individual income tax system, using credits and refunds for households who file returns and direct payments for other households. This alternate method has the advantage of not reducing the tax bases for sales and property taxation but instead of applying tax rates to broadly defined sales and property tax bases. The amount of revenue produced can easily be changed by altering tax rates; and if the broad tax bases cause excessive tax burdens for particular taxpayers or groups, some of the revenue can be used to finance tax relief, via refunds, without eroding the tax bases.

Instability of revenue yield can refer to the year-to-year fluctuations caused by the normal ups and downs of economic activity (the business cycle) and also to longer-run economic fluctuations such as those characteristic of

the coal industry. The revenue increases following adoption of the coal severance tax in 1972, and rate increase in 1976, were to a large extent used to finance the revenue-reducing effects of the sales tax exemptions. Placing increased reliance on tax revenue from the coal industry caused the Kentucky tax system to become more unstable in both of the two meanings described above.

The coal industry is notorious for suffering periodic booms and slumps. Major changes in coal production can result from governmental regulation of mining and use of coal, price and quantity changes among major energy sources, or strikes. But greater revenue instability resulted also because the increased coal tax revenue was used to finance instability-increasing modifications of the sales tax. The sales tax exemptions of groceries, prescription drugs, and residential energy utilities have the effect of causing the sales tax to be less regressive in burden distribution and, therefore, less stable in yield over periods of fluctuating individual income levels. When incomes fall, households tend to maintain food expenditures while reducing their spending for less necessary items, and vice-versa when incomes rise. The same is true for residential energy purchases. Consequently, yield of the Kentucky sales tax varies widely over the business cycle because the more stable parts of consumer expenditures are exempted and only the less stable parts are taxed.

A Broad Look at Kentucky's Tax Options

What could be done to increase the level of state-local tax revenue produced by the Kentucky economy—assuming, for the sake of discussion, that a revenue increase is desired? Looking broadly at the question, without attempting to explain specifics, two options can be identified.

The present state-local tax system in Kentucky is the result of many changes over the years and could reasonably be assumed presently to be what the public desires. Additional revenue could best be raised, therefore, by merely increasing the tax rates applied to the existing bases of all or most tax types. Rates could be increased when additional tax revenue is needed and reduced when less is needed. These could be fractional changes, if necessary. Because computation of tax amounts is performed either by persons well-trained in such work or, in the case of non-experts, by using tax tables that are prepared by specialists, changing tax rates by fractional amounts should present few problems. There are two main advantages to across-the-board tax *rate* changes, instead of tax *base* changes. First, rate changes do not pit one taxpayer group against another. Second, rate changes can be made as frequently as necessary because they are much less complicated and disruptive than base changes.

A second but less simple tax-increase option is to make corrections for particular tax types if a consensus of opinion regards some tax rates to be too low or some exclusions, exemptions, deductions, or credits to be unjustified. (Insofar as some of the tax changes of the 1970 decade had the purpose of encouraging the state's economic development, in general or as regards particular industries, the subject of tax revision would best be viewed as including more than the equity and adequacy issues.) If total revenue yield is still inadequate after making selective rate and base corrections, all tax rates could be raised as described in the first tax option. Some reformers might advocate repeal of some or all of the exemptions awarded in the 1970 decade, as described in Table 1. Other reformers might suggest tax rate increases for the cigarette, liquor, and motor vehicle fuel and license taxes. Still other reformers might suggest repeal of House Bill 44 or allow larger annual adjustments than the present 4 percent.[6] Individual income tax simplification and revision have been studied recently, and the Brown Administration presented a very good first proposal in 1982. If modified to overcome reasonable objections (mainly regarding itemized deductions) and if made part of an overall tax-increase program, the proposal might well be irresistable because of its excellent solution of the complexity problem.

Notes

[1]Don M. Soule and Stephen E. Lile, *Some Problems of Equity and Adequacy in Kentucky's State-Local Taxation* (Lexington, Ky.: Center for the Study of State and Local Government Economics, Office of Development Services and Business Research, College of Business and Economics, University of Kentucky), February 1970.

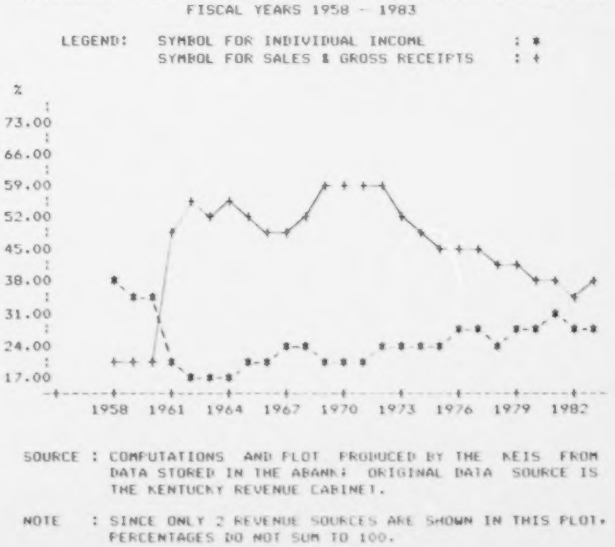
[2]Stephen E. Lile, "The Effect of Tax Revision on Revenue Adequacy in Kentucky," *Kentucky Economy: Review & Perspective*, Vol. 5, No. 2, June 1981, pp. 8-10.

[3]Kentucky economic changes in the period since 1970 are discussed in Don M. Soule, "The Changing Kentucky Economy: 1970 to 1980," *Council of Economic Advisors Annual Report—1982*, pp. 37-62 and also in articles in the December 1982 and June 1983 issues of *Kentucky Economy: Review & Perspective*.

[4]Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce, August 1983. See also the table on page 16 of this issue of *Review & Perspective*.

[5]These findings were based on Stephen E. Lile and Don M. Soule, "Interstate Differences in Family Tax Burdens," *National Tax Journal*, Vol. 22, No. 4, December 1969, pp. 433-45.

[6]See also Stephen E. Lile, "What Are Kentucky's Tax Policy Options?" *Kentucky Economy: Review & Perspective*, Vol. 4, No. 4, December 1981, pp. 6-9, 14.


INDIVIDUAL INCOME AND SALES TAXES AS %S OF TOTAL GENERAL FUND
FISCAL YEARS 1958 - 1983
LEGEND: SYMBOL FOR INDIVIDUAL INCOME : *
SYMBOL FOR SALES & GROSS RECEIPTS : +
%
73.00
66.00
59.00
52.00
45.00
38.00
31.00
24.00
17.00
1958 1961 1964 1967 1970 1973 1976 1979 1982
SOURCE : COMPUTATIONS AND PLOT PRODUCED BY THE KEIS FROM DATA STORED IN THE ABANK; ORIGINAL DATA SOURCE IS THE KENTUCKY REVENUE CABINET.
NOTE : SINCE ONLY 2 REVENUE SOURCES ARE SHOWN IN THIS PLOT, PERCENTAGES DO NOT SUM TO 100.

(continued from page 1)

seasonally *unadjusted* total and insured unemployment rates in Kentucky have declined since the beginning of 1983. However, the seasonally *adjusted* monthly unemployment rate for Kentucky's civilian labor force actually increased slightly during the first 6 months of 1983—from 10.59 percent in January to about 11.18 percent in June. The seasonally adjusted insured unemployment rate declined slightly over the same period—from 5.75 percent in January to 5.18 percent in June—but these rates can be affected by eligibility provisions of the unemployment insurance law and may not be as closely related to current economic conditions as the total unemployment rate.

In general, the available data for Kentucky appear to suggest that the upturn in economic activity coincided with the beginning of national economic recovery in late 1982. At both levels residential construction, one of the most depressed activities in the past recession, has commenced recovery even to the extent of preceding the general business recovery. Yet, general recovery in Kentucky appears to be lagging behind that of the nation if adjusted monthly unemployment rates are any indication of actual developments.

Projected developments. The outlook for continued national economic recovery appears promising. The Composite Index of 12 Leading Indicators increased in July for the eleventh straight month, indicating that recovery is likely to be sustained. Data Resources, Inc. (DRI), in figures released in September of 1983, projected real GNP would rise by 3.2 percent and 5.0 percent in 1983 and 1984, respectively. The unemployment rate would remain at 9.6 percent in 1983 but decline to 8.2 percent in 1984. The Consumer Price Index (CPI) would increase by only 3.2 percent in 1983 and 4.8 percent in 1984. Labor productivity, which lagged for several years, has started to improve and is projected to continue advancing through 1983 and 1984. In general, strength would continue to be reflected in residential fixed investment (housing), new car sales and other consumer spending; nonresidential fixed investment is expected to recover more slowly. Exports are expected to lag through 1983 and improve only slightly in 1984.

There is continued concern over the size of the federal deficit, which is projected by DRI to rise from $183 billion in 1983 to $192 billion in 1984 and $205 billion in 1985. Although tax revenues will increase with economic expansion, government spending commitments are expected to rise more rapidly, thus contributing to an even larger deficit.

The Commonwealth will generally benefit from national expansion, but not all sectors will share equally. Kentucky's farm sector has been hit particularly hard by a wet spring followed by summer drought conditions. Generally, farm output in the 1983 crop season is well below that of 1982. Burley tobacco, soybean and corn yields are expected to be unusually low within the state. Kentucky's coal production in 1983 has been at least 10 percent below that of the comparable period in 1982; a slow recovery is expected in this sector.

Firms and industries that have experienced declining export sales during the past several months cannot anticipate immediate improvement. The U.S. dollar remains strong in world markets; but this means it is costly in terms of other currencies which in turn serves to retard the flow of U.S. shipments to foreign markets. In addition, many of the foreign trading partners of the U.S., especially the industrial countries, are just beginning to experience economic recovery and are not yet strong markets for U.S. exports.

Conditions in other sectors look more favorable in Kentucky. Mortgage rates are projected to remain almost unchanged for the next few years. Nationally, housing starts are expected to increase from 1.059 million in 1982 to 1.689 million in 1983 and 1.731 million in 1984. Given the sharp decline in Kentucky housing starts in 1981 and the significant long term population growth projected for the state, residential construction recovery in Kentucky should at least equal that of the nation in relative terms. It should also support recovery in related industries, such as construction equipment and consumer durable equipment, which are important industries in Kentucky. The increase in projected sales of U.S. produced automobiles, from 5.8 million in 1982 to 7.0 million in 1983 and 8.1 million in 1984, will contribute to automobile and automobile-related production in Kentucky.

In conclusion, although one of the most severe economic recessions of the post-World War II period seems to have ended, this does not mean prosperity is at hand. Rather, output expansion in the industries most severely affected in recent years will gradually promote growth in related sectors and become more pervasive in nature.

SELECTED SEASONALLY ADJUSTED KENTUCKY ECONOMIC INDICATORS

	198208	198209	198210	198211	198212	198301	198302	198303	198304	198305	198306	198307
EMPLOYMENT												
AGRICULTURE	64.031	63.918	63.796	63.776	63.988	64.810	64.301	64.008	63.712	63.324	62.889	62.988
NON-AG WAGE & SALARY	1160.184	1156.765	1155.698	1154.464	1145.964	1166.357	1163.980	1165.936	1161.068	1160.085	1167.486	1176.073
MANUFACTURING	245.090	242.880	240.310	238.729	235.756	239.880	238.594	241.548	243.292	242.895	245.385	249.341
COAL MINING	46.407	45.180	44.255	44.490	43.978	45.554	46.778	46.934	46.740	47.487	46.648	46.403
CONSTRUCTION	48.437	48.043	49.047	48.999	48.763	54.245	52.632	52.242	49.857	50.423	50.531	49.584
TRADE	260.149	259.261	260.947	259.167	256.093	263.371	266.044	265.380	263.604	260.638	262.805	261.461
SERVICES	216.037	214.734	216.504	216.989	216.655	219.114	219.285	219.291	218.474	218.334	222.614	224.100
CIVILIAN GOVERNMENT	221.445	225.070	224.596	224.853	223.924	225.379	222.642	221.724	217.707	216.677	219.491	223.869
AVG WKLY HOURS IN MFG	38.830	38.675	38.053	39.033	39.714	39.156	39.327	38.814	39.264	39.567	39.213	39.394
TOTAL HOUSING UNITS AUTHORIZED	514.710	760.591	871.009	843.541	783.373	893.692	952.440	902.139	792.748	674.013	1045.199	1640.600

UNITS: EMPLOYMENT IN THOUSANDS; AVERAGE WEEKLY HOURS; AND HOUSING UNITS.
SOURCE: KENTUCKY INFORMATION SYSTEM -- SEASONAL ADJUSTMENT BY PROGRAM X-11.

Attitudes on Major Economic Issues in Kentucky

by Richard S. Snyder*

In April 1983, as the first phase of a survey design to collect information on major economic issues in Kentucky, a pilot questionnaire was sent to the 207 members of the Kentucky Economic Association (KEA) having Kentucky mailing addresses. The mission of the KEA is to foster economic analysis of major economic issues in Kentucky, and so the selection of its membership to identify such issues seemed reasonable. Although it is not known whether the 64 respondents to the questionnaire are representative of the KEA as a whole, the information collected was extensive enough to form the basis for a more comprehensive questionnaire, to be distributed to a larger sample at a later date. The pilot survey fulfilled its objective of obtaining a reasonably extensive issue base; no follow-up efforts were pursued for this first phase.

The survey sought to obtain information about the five most important economic issues in Kentucky, by asking respondents to list the five major economic issues in Kentucky believed "to be the most important, and therefore, most essential for the next Governor of Kentucky to understand and deal with." Using a weighted average to rank the issues, the five identified were, in their order of importance, Education, Taxation Policy, Economic Development, Unemployment, and the Right-to-Work issue.[1] Twenty-six issues were identified in all.

Table 1 shows the seven highest ranked economic issues and associated statistics. The issues appear to form four distinct groupings based on the weighted average. The first issue, education, stands alone with its weighted average over 46 percent higher than the second ranked issue. Education is an aggregate of nine separate, but related issues: education in general, teachers' salaries, quality of education, higher education, vocational education, secondary education, and primary education. Collective bargaining in education was included under the general collective bargaining category, an issue ranked at about the mid-point of all the issues.

The second grouping contains issues two and three, taxation policy and economic development, each within .468 points of each other. The third group consists of rankings four and five, unemployment and right-to-work. The fourth group includes all 21 remaining issues, of which only two are shown in Table 1. None of the issues in this group had a weighted average of more than 1.25, suggesting greater diversity in attitudes regarding the economic issues considered of lesser importance.

TABLE 1

RANKING OF MAJOR ECONOMIC ISSUES IN KENTUCKY

Issues Selected by Survey Respondents	Rank	Total Responses	Weighted Average
Education	1	57	5.719
Taxation Policy	2	38	3.906
Economic Development	3	45	3.438
Unemployment	4	18	2.344
Right-to-work	5	16	2.000
Coal Industry	6	15	1.250
Regulation of Business	7	11	0.844

SOURCE: The author.

Some background information was requested from each respondent. On this basis, the respondents were grouped according to length of residence in Kentucky, type of employment, and level of education. Over 70 percent of the sample consisted of respondents who have lived in Kentucky for more than ten years, 55 percent of the total are employed in academia; almost 52 percent of the sample have doctorate degrees in economics, while an additional 14 percent have doctorates in other disciplines.

There was considerable consistency within each of these groups in their selection of the five major economic issues. Respondents employed in academia were not found to stress the education issue more than the other respondents, for example. The convergence of opinions seems to suggest a consensus related to strengthening the State's economy as a whole. Issues of education, unemployment, and right-to-work are directed at the labor force, the quantity and quality of which will determine the nature of the State's economic base. Taxation policy is also a very important ingredient in the determination of the economic base, especially for businesses contemplating relocation.

Together, the four issues of education, unemployment, right-to-work, and taxation policy are a significant part of the foundation upon which economic development in general is based. An economy perceived to be below its potential, or below some established norm, is one which can be viewed as in need of economic development. It is this interpretation that the author finds manifest in the responses of KEA members to his questionnaire. This interpretation will be subject to reevaluation based upon data results from his forthcoming survey of a larger and more diverse population.

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Note

[1]The weighting assigned 10 points for responses indicated as most important, 8 points for the second most important issue, 6 points for the third issue, 4 points for the fourth issue, and 2 points for the last or fifth ranked issue. The cumulative weighted responses were then divided by the total number of responses, to give the weighted average of each issue.

selected indicators OF ECONOMIC

These tables of selected indicators of economic activity were prepared by a special-purpose program of the Kentucky Economic Information System. The data in the tables are reported figures which were obtained from a variety of state and federal agencies, as well as from private firms.

UNITED STATES DATA

	Apr. 1983	May 1983	June 1983	Qtr. II 1983	% Chg. 83-I 83-II	% Chg. 82-II 83-II
CONSUMER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)						
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, OLD DEFINITION	295.50	296.80	297.50	296.60	1.23	3.23
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, NEW DEFINITION	295.50	297.10	298.10	296.90	1.25	NA
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, FOOD AND BEVERAGES	284.60	285.00	284.70	284.77	1.04	2.34
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, HOUSING (EXCL RENTAL EQUIV)	320.00	320.90	321.60	320.83	1.05	2.32
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, HOUSING (INCL RENTAL EQUIV)	320.30	321.80	323.10	321.73	1.07	NA
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, APPAREL AND UPKEEP	195.50	196.10	195.60	195.73	1.68	2.26
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, TRANSPORTATION	292.30	296.20	298.30	295.60	1.90	2.96
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, MEDICAL	353.50	354.30	355.40	354.40	1.12	9.39
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, ENTERTAINMENT	244.60	244.80	245.40	244.93	0.77	4.39
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, OTHER	283.20	283.60	284.50	283.77	0.94	11.34
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, SPECIAL INDEX: ENERGY	410.00	421.30	427.30	419.53	3.07	3.47
PRODUCER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)						
PRODUCER PRICE INDEX, ALL COMMODITIES	300.80	301.70	302.50	301.67	0.40	1.03
PRODUCER PRICE INDEX, ALL FINISHED GOODS	283.00	284.30	285.00	284.10	0.11	2.07
PRODUCER PRICE INDEX, FINISHED CONSUMER GOODS	282.00	283.50	284.40	283.30	0.00	1.77
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS	309.10	310.10	311.70	310.30	0.25	0.14
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS FOR MANUFACTURING	291.10	292.00	292.40	291.83	0.64	0.42
PRODUCER PRICE INDEX, CRUDE MATERIALS	325.70	325.70	323.20	324.87	1.98	-0.19
PRODUCER PRICE INDEX, CRUDE FOODSTUFFS AND FEEDSTUFFS	256.80	256.50	252.10	255.13	3.71	-1.48
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, SPOT(1967=100)	467.80	431.60	441.90	447.10	1.24	4.03
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, CONTRACT(JUNE76=100)	150.70	150.60	149.90	150.40	-0.02	0.13
CONSUMER PRICES: ENERGY (U.S. CITY AVERAGE)						
AVG PRICE FOR UTILITY (PIPED) GAS, PER 40 THERMS	26.93	27.41	27.27	27.20	4.04	16.36
AVG PRICE FOR UTILITY (PIPED) GAS, PER 100 THERMS	62.19	64.77	64.70	63.89	6.38	18.25
AVG PRICE FOR ELECTRICITY, PER 500 KWH	37.12	37.42	39.22	37.92	1.67	2.22
AVG PRICE FOR FUEL OIL #2 (HOME HEATING OIL), PER GALLON	1.07	1.09	1.09	1.08	-6.05	-7.97
AVG PRICE, GASOLINE, ALL TYPES, PER GALLON	1.20	1.24	1.26	1.23	5.23	-0.75
AVG PRICE, GASOLINE, LEADED REGULAR, PER GALLON	1.13	1.18	1.20	1.17	5.92	-1.43
AVG PRICE, GASOLINE, UNLEADED REGULAR, PER GALLON	1.21	1.26	1.28	1.25	5.19	-0.53
AVG PRICE, GASOLINE, LEADED PREMIUM, PER GALLON	1.32	1.38	1.43	1.38	4.59	-0.70
LABOR FORCE (SEASONALLY ADJUSTED, MILLIONS OF PERSONS)						
LABOR FORCE, TOTAL (INCL RES ARMED FORCES)	112.46	112.42	113.60	112.82	0.56	0.50
LABOR FORCE, CIVILIAN (EXCL RES ARMED FORCES)	110.79	110.75	111.93	111.16	0.57	0.97
EMPLOYMENT, RESIDENT ARMED FORCES	1.67	1.67	1.67	1.67	0.26	0.22
EMPLOYMENT, TOTAL CIVILIAN BY RESIDENCE (EXCL ARMED FORCES)	99.46	99.56	100.79	99.93	0.85	0.21
EMPLOYMENT, AGRICULTURE	3.37	3.37	3.52	3.42	0.79	0.86
EMPLOYMENT, NONAGRICULTURAL	96.09	96.19	97.26	96.51	0.85	0.19
UNEMPLOYED, CIVILIAN, TOTAL	11.33	11.19	11.15	11.22	-1.90	8.23
UNEMPLOYMENT RATE, TOTAL LABOR FORCE	10.10	10.00	9.80	9.95	-2.45	7.69
UNEMPLOYMENT RATE, CIVILIAN LABOR FORCE	10.20	10.11	10.00	10.10	-2.45	7.19
OTHER SELECTED NATIONAL INDICATORS:						
U.S. GROSS NATIONAL PRODUCT ($ B) (% CHG AT ANNUAL RATE)	NA	NA	NA	3272.00	13.29	6.57
U.S. REAL GROSS NATIONAL PRODUCT ($ B 72$) (% CHG AT ANNUAL RATE)	NA	NA	NA	1525.10	9.73	2.40
PERSONAL INCOME, TOTAL, SEASONALLY ADJUSTED ($ B)	2689.00	2719.30	2732.60	2713.63	8.69	5.87
COMPOSITE INDEX OF 12 LEADING INDICATORS (1967=100)	152.40	154.20	157.20	154.60	4.65	13.76
INDEX OF INDUSTRIAL PRODUCTION, SEASONALLY ADJUSTED (1967=100)	142.60	144.40	146.30	144.43	4.28	3.64
INTEREST RATE, YIELD ON 3-MONTH TREASURY BILLS	8.25	8.19	8.82	8.42	4.21	-31.87
PRIVATE HOUSING UNITS AUTH, 16000 PERMIT-ISSUING PLACES (SADJ THOU)	1536.00	1635.00	1761.00	4932.00	58.87	79.02
TOTAL INSTALLMENT CREDIT OUTSTANDING AT END OF MONTH ($ B)	344.75	347.19	353.01	353.01	3.05	6.23

CTIVITY

KENTUCKY DATA

	Apr. 1983	May 1983	June 1983	Qtr. II 1983	% Chg. 83-I 83-II	% Chg. 82-II 83-II
LABOR FORCE (NOT SEASONALLY ADJUSTED, THOUSANDS)						
LABOR FORCE, TOTAL CIVILIAN	1654.80	1648.70	1674.70	1659.40	-0.07	-1.73
EMPLOYMENT, TOTAL, BY PLACE OF RESIDENCE	1470.90	1473.10	1486.90	1476.97	1.28	-2.58
EMPLOYMENT, AGRICULTURAL	55.60	62.80	76.00	64.80	37.68	-1.97
EMPLOYMENT, TOTAL NON-AGRICULTURAL	1415.30	1410.30	1410.90	1412.17	0.06	-2.61
UNEMPLOYMENT RATE	11.10	10.70	11.20	10.99	-9.71	7.60
EMPLOYMENT, TOTAL NON-AGRICULTURAL WAGE AND SALARY	1162.00	1169.20	1173.30	1168.17	1.80	-0.78
EMPLOYMENT, BITUMINOUS COAL & LIGNITE MINING (SIC 12)	45.30	45.50	45.90	45.57	-0.22	-7.01
EMPLOYMENT, CONTRACT CONSTRUCTION	47.30	50.40	53.10	50.27	12.37	-1.31
EMPLOYMENT, TOTAL MANUFACTURING	243.90	245.80	248.00	245.90	2.67	-1.77
EMPLOYMENT, MANUFACTURING, DURABLE	130.90	132.20	133.70	132.27	4.48	-2.63
EMPLOYMENT, MANUFACTURING, NON-DURABLE	113.00	113.60	114.30	113.63	0.65	-0.76
EMPLOYMENT, TRANSPORTATION, COMMUNICATIONS & PUBLIC UTILITIES	61.80	62.60	62.60	62.33	1.30	-6.59
EMPLOYMENT, WHOLESALE & RETAIL TRADE	260.10	260.10	262.00	260.73	0.93	0.24
EMPLOYMENT, FINANCE, INSURANCE & REAL ESTATE (SIC 60-67)	50.80	52.00	52.40	51.73	0.65	-0.39
EMPLOYMENT, SERVICES (SIC 70-80)	221.30	221.80	225.10	222.73	3.53	2.30
EMPLOYMENT, CIVILIAN GOVERNMENT	225.90	225.10	218.10	223.03	-1.36	-0.56
EMPLOYMENT, STATE & LOCAL GOVERNMENT	185.30	184.50	177.60	182.47	-1.85	-1.23
HOURS AND EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING						
AVG WEEKLY HOURS, PROD WORKERS, TOTAL MANUFACTURING	38.90	39.60	39.50	39.33	1.20	2.79
AVG WEEKLY HOURS, PROD WORKERS, MANUFACTURING DURABLES	38.50	39.40	39.20	39.03	1.39	2.81
AVG WEEKLY HOURS, PROD WORKERS, NON-DURABLE MANUFACTURING	39.50	39.80	39.90	39.73	1.36	3.11
AVG HOURLY EARN, PROD WORKERS, TOTAL MANUFACTURING	8.68	8.71	8.74	8.71	1.52	4.39
AVG HOURLY EARN, PROD WORKERS, MANUFACTURING DURABLES	9.39	9.40	9.42	9.40	0.82	4.17
AVG HOURLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	7.85	7.88	7.93	7.89	2.11	4.69
AVG WEEKLY EARN, PROD WORKERS, TOTAL MANUFACTURING	337.65	344.92	345.23	342.60	2.74	7.31
AVG WEEKLY EARN, PROD WORKERS, MANUFACTURING DURABLES	361.52	370.36	369.26	367.05	2.22	7.09
AVG WEEKLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	310.08	313.62	315.24	312.98	3.38	7.82
MINING (MILLIONS OF TONS, MILLIONS OF TAX DOLLARS)						
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, EASTERN KY, TOTAL	7.12	7.48	7.73	22.34	-1.93	-26.26
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, WESTERN KY, TOTAL	2.94	3.10	2.61	8.66	-7.35	-11.93
AVG HOURLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	14.53	14.57	14.66	14.59	-1.97	11.60
AVG WEEKLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	479.49	473.53	480.85	477.96	-3.90	-22.69
AVG WEEKLY HOURS, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	33.00	32.50	32.80	32.77	-1.90	-30.73
TAX RECEIPTS, COAL SEVERANCE, CONSOLIDATED, TOTAL	16.67	14.36	21.14	52.17	*	-11.94
HOUSING (MILLIONS OF $, NO. OF PRIVATE RESID. UNITS--NOT SEAS ADJ)						
VALUE OF CONSTRUCTION CONTRACTS, RESIDENTIAL & NON-RES	207.80	178.20	229.70	615.70	57.47	62.28
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, 1 UNIT	562.00	520.00	647.00	1729.00	62.65	87.53
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, 1 UNIT	25.59	26.94	32.73	85.26	74.93	124.73
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, TOTAL	754.00	773.00	1092.00	2619.00	22.21	109.52
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, TOTAL	30.00	31.88	44.67	106.56	53.72	135.71
NET LOANS MADE & ACQUIRED BY KY. SAVINGS & LOAN ASSOCIATIONS	-6.03	28.43	37.25	59.65	-2.65	158.85
RETAIL SALES (MIL $, 000 CARS)						
TAX RECEIPTS, GENERAL FUND, SALES AND GROSS RECEIPTS	64.51	74.24	65.66	204.40	*	2.16
NEW PASSENGER CAR REGISTRATIONS, TOTAL, NOT SEAS. ADJ.	8.16	8.02	10.89	27.07	*	17.48
SELECTED STATE GOVERNMENT RECEIPTS (MIL $)						
TAX AND NONTAX RECEIPTS, GENERAL FUND, TOTAL	222.49	153.95	185.78	562.22	*	1.55
TAX RECEIPTS, GENERAL FUND, SALES & USE TAXES, TOTAL	57.85	56.74	57.46	172.04	*	-1.07
TAX RECEIPTS, GENERAL FUND, INCOME TAX, INDIVIDUAL	87.43	45.97	33.94	167.34	*	7.21
TAX RECEIPTS, GENERAL FUND, INCOME TAX, CORPORATION	19.69	4.58	42.08	66.36	*	-7.27
TAX RECEIPTS, STATE ROAD FUND, STATE SHARE	29.39	31.52	36.67	97.58	*	-1.20
TAX RECEIPTS, STATE ROAD FUND, MOTOR FUELS TAXES, NORMAL	16.50	12.13	20.06	48.69	*	1.20
TAX RECEIPTS, STATE ROAD FUND, MOTOR VEHICLE USAGE TAX	11.23	9.97	12.22	33.42	*	12.10

PRIVATE SOURCES FOR THE ABOVE DATA INCLUDE:
F. W. DODGE DIVISION (MCGRAW-HILL INFORMATION SYSTEMS COMPANY), VALUE OF CONSTRUCTION CONTRACTS;
R. L. POLK & COMPANY, NEW CAR REGISTRATIONS

NOTE: THE DATA ON PERMIT-AUTHORIZED CONSTRUCTION COME FROM THE BUREAU OF THE CENSUS, U.S. DEPARTMENT OF COMMERCE AND REPRESENT THE KENTUCKY PORTION OF THE NATIONAL SURVEY OF 16,000 PERMIT-ISSUING PLACES.

* = QUARTER TO QUARTER COMPARISONS NOT MEANINGFUL DUE TO SEASONAL VARIATION

The Revised Outlook for Kentucky Revenues for Fiscal Year 1984

Prepared by staff of the Office of Revenue Estimating and Economic Analysis, Kentucky Revenue Cabinet*

This article contains the Kentucky Revenue Cabinet's revised forecast for the General Fund and Transportation Fund for fiscal year 1983-84 (FY 1984) and some of the data and rationale supporting the revision. It is based upon testimony provided by Secretary Ronald G. Geary, Kentucky Revenue Cabinet, to the Interim Joint Committee on Appropriations and Revenue of the Kentucky General Assembly, on September 22, 1983. The basis for the revisions are trends in fiscal year 1982-83 receipts and a review of the Kentucky economy.

Receipts for Fiscal Year 1982-83

Fiscal Year 1982-83 (FY 1983) was another poor year for Kentucky revenue. Compared to the previous year, combined tax receipts for the General and Transportation Funds rose only 4.8 percent. General Fund *tax* receipts increased 5.5 percent, and Transportation Fund *tax* receipts rose 1.1 percent. Even in FY 1980, when the General Assembly changed the revenue base and affected a large tax reduction by removing the sales tax from residential utility bills and by limiting property tax revenue growth, combined tax receipts increased by 3.4 percent in the state's two major funds. *Non-tax* receipts for the General Fund during FY 1983 were down by 2.8 percent, due largely to declining interest rates paid on state deposits. In the Transportation Fund, higher departmental fees and an increase in federal grants pushed *non-tax* receipts up by 4.4 percent. In FY 1983, the total tax and non-tax revenues of the General Fund grew by 5.2 percent and the total Transportation Fund grew 1.7 percent.

Tax receipts would have been lower than they were in FY 1983, had it not been for several developments. The 1982 General Assembly adopted new wholesale alcoholic beverage taxes; these boosted General Fund receipts by about $20 million. It also strengthened the Transportation Fund by adopting a weight-distance tax on trucks and by raising the minimum rate for motor fuels taxes from 9 percent to 10 percent of the average wholesale price. The weight distance tax produced $17.8 million, about 5 percent of the Transportation Fund total. Raising the minimum rate on motor fuels prevented a loss of about $18 million in revenue which would have occurred had the change not been made. In addition, the Revenue Cabinet added nearly $30 million to the General Fund by intensifying its taxpayer audits to collect taxes due.

Federal tax law changes also had an effect. The 10 percent reduction in federal individual income tax rates in July 1982 reduced the amount of federal income tax which Kentucky taxpayers could deduct from Kentucky income, thereby increasing Kentucky's income tax base. This change was estimated to have increased Kentucky's income tax receipts by about $26 million during 1982-83. However, the effect of this federal change was partially offset by other federal changes—subsequently adopted by Kentucky—which liberalized certain deductions.

When the effects of law changes and audit collections are calculated, the underlying economic performance of Kentucky's major taxes was weak during 1982-83. After adjustment for the above factors, three of the state's seven largest tax sources produced less revenue than in the previous year; the two largest sources produced only slight growth. Adjusted sales and use tax revenues grew less than 2.0 percent, and adjusted revenues from the individual income tax grew by only 0.2 percent. Coal severance tax receipts dropped 16.6 percent, motor fuels declined by 11.2 percent, and corporation income tax revenues fell 1.0 percent. The property tax, portions of which are limited by law to 4.0 percent annual growth, grew by 3.7 percent. The motor vehicle usage tax, reflecting a rebound in automobile sales during the last six months of FY 1983, showed signs of a recovering economy and grew 6.7 percent.

A Review of the Kentucky Economy

The Kentucky economy is best understood in relation to the rest of the nation, which is finally emerging from its worst recession in the post World War II era. Although the national downturn began in July 1981, FY 1983 was still restrained with secular stagnation. Indeed real GNP declined slightly from the previous fiscal year and the U.S. unemployment rate averaged 10.3 percent during FY 1983. On the other hand, the moderate inflation rate of 4.3 percent for FY 1983 helped lower interest rates. Nevertheless, the relatively high real interest rates reflected the uneasy concerns of the financial community over a cloudy economic future.

The fiscal policies executed under the Reagan Administration have complicated the situation. Although there has been an important shift away from non-defense toward defense spending, annual Federal government total expenditures have continued to grow at about 20 percent of the GNP. At the same time, the Economic Recovery Tax Act of 1981 mandated the largest tax cut in American history.

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The Federal budget deficit has grown dramatically as a result, and is expected to reach almost $200 billion next year. The implied government financing potentially could crowd out private borrowers, threatening the current recovery and pressuring the Federal Reserve to accommodate the larger deficit. Such actions could rekindle double-digit inflation. Nevertheless, the consensus opinion of professional forecasters seems to be for modest recovery continuing through FY 1984.[1] Yet the great feeling of uncertainty is clearly reflected in the erratic performance of the financial markets.

Kentucky's economy was damaged more than the nation's during the recession of 1981-82. For example, the Kentucky unemployment rate averaged 11.1 percent during FY 1983, almost a full percentage point higher than the national average. In addition, Kentucky's personal income did not appear to grow as fast as the national average.[2] Furthermore, the economic recovery in the Commonwealth appears to be lagging behind the rest of the nation.

A partial explanation of the extra aggravation within the Kentucky economy probably lies in the historical pattern of economic development. It is well-known that high-growth regions generally tend to fare better during a national recession than low-growth regions.[3] The trend throughout most of the last decade, with Kentucky ahead of the national average, as measured by key economic indicators such as personal income and employment, reversed itself in the early 1980s. This loss of momentum probably caused greater economic vulnerability within the state.

Another factor lies in the uneven impact of Federal policies. Since Kentucky does not possess a significant share of the defense industry, Federal government defense-related expenditures have not benefited this state as much as some others. Furthermore high interest rates, induced by tight monetary policies, do not affect all industries equally. The manufacturing, construction, and mining sectors have been hit especially hard nationwide as well as statewide. Kentucky's disproportionate reliance upon coal and durable goods partially accounts for the additional severity of this state's recession. On the other hand, certain areas within the state, such as Fayette County, have benefited from a more favorable mix of private and public employment, and have continued to grow at a rate greater than the national averages through at least 1981.[4]

Manufacturing is the largest sector of the Kentucky economy, providing over 20 percent of all available jobs. The durable goods portion of this industry is especially vulnerable to high interest rates. Indeed Kentucky employment for the production of durable goods declined by 8.7 percent in FY 1983, while the employment level for non-durable goods production declined only by 3.2 percent. This phenomenon was especially visible in Jefferson County, which possesses a relatively large durable goods sector, including a supporting industry for automobile manufacturing. The lower interest rates stimulated a national upswing in automobile sales in the second quarter of calendar 1983 that should help the Kentucky economy throughout FY 1984.

The depressed Kentucky construction industry has responded quickly to lower interest rates, with the value of construction contracts improving by 17.7 percent and the number of permits authorized for residential construction improving by 61.3 percent in FY 1983. The strongest gains were recorded in the second quarter of calendar 1983, and this sector can be expected to lead the Kentucky economy throughout FY 1984. Yet employment continues to lag behind in the state construction industry, declining by 2.5 percent during FY 1983.

The Kentucky coal industry supplies about 18 percent of the U.S. market. It was perhaps more adversely affected by the national recession than any other sector of the state economy. The Kentucky Cabinet for Human Resources estimates that the unemployment rate within the Kentucky coal industry soared to 25.3 percent during FY 1983 compared to 7.9 percent during FY 1982. Kentucky coal production declined by 20.7 percent during the same time period. The decline in international oil prices, essentially caused by a worldwide recession, has compounded the problem for coal. Western Kentucky coal was especially damaged by overstockpiling and EPA regulations; Eastern Kentucky coal was damaged by the declining U.S. steel industry, falling exports, and overstockpiling. The national recovery should help somewhat, but the industry will probably remain depressed throughout FY 1984, because of the underlying structural damage cited above.

The behavior of the coal industry may explain the different response of the Kentucky economy to the recession of 1981-82 compared to the national recession of 1973-75. The earlier recession was induced by a supply shock, i.e., the Arab oil embargo, which stimulated the consumption of coal. The recent recession was induced by a demand shock, i.e., restrictive monetary policies, which discouraged the consumption of coal. Consequently, the Kentucky coal sector was healthy during the earlier national recession, and the Kentucky economy as a whole fared much better than in recent times.

The prospects for FY 1984 depend in large measure upon the impact of Federal economic policies. DRI forecasters anticipate a moderate growth rate of 4.7 percent for real GNP tempered by an inflation rate of 3.8 percent during FY 1984. U.S. personal income will grow by 8.1 percent in nominal terms. The U.S. unemployment rate is expected to continue its slow decline to an annual value of 9.23 percent. Although interest rates will creep upward from their lower values of the early fall, 1983, they will manage to maintain a lower average in FY 1984 than in 1983. The automobile and construction industries will lead this moderate national recovery.[5]

Kentucky can expect to share some of the gains made by the rest of the nation in most industrial sectors, but as long as the coal sector remains depressed, the Kentucky industrial economy will probably grow more slowly than the nation as a whole. Meanwhile, the summer drought of 1983 has severely damaged the agricultural economy. In spite of these difficulties, the Commonwealth will improve slightly in FY 1984 with positive growth in both real personal income and employment. A similar conclusion should

TABLE 1

KENTUCKY REVENUES: FISCAL YEAR 1983 AND REVISED ESTIMATES FOR FISCAL YEAR 1984

	Actual Receipts for 1982-83 (Millions)	September 1983 Revised Estimate for 1983-84 (Millions)	Growth Over Actual Receipts for 1982-83	September 1983 Estimate Compared with May 1982 Budget Estimates for FY 1984 (Millions)
GENERAL FUND SUMMARY				
Sales and Use	$ 700.21	$ 746.99	6.7%	$ (81.71)
Individual Income	647.17	701.88	8.5	(117.92)
Corporation Income	172.12	181.39	5.4	21.29
Coal Severance - Total	201.81	211.36	4.7	(87.64)
Less: Transfer	0.00	(21.75)*	—	0.00
Equals: General Fund	201.81	189.61	(6.0)	(87.64)
Oil Production	10.70	11.50	7.5	(2.00)
Mineral Severance	5.35	5.90	10.3	(0.10)
Natural Gas Severance	3.59	3.90	8.6	(0.40)
Total Property	203.34	219.66	8.0	(0.68)
Inheritance	38.32	43.50	13.5	8.50
Investment Receipts	32.42	35.40	9.2	(10.00)
NEW TAXES				
Distilled Spirits Wholesale	11.20	11.80	5.4	(7.20)
Beer Wholesale	18.87	19.80	4.9	(6.40)
Wine Wholesale	2.38	2.50	5.0	(1.90)
Other General Fund	160.54	160.18	(0.2)	4.37
TOTAL GENERAL FUND	$2,208.02	$2,334.01	5.7%	$(281.79)
TRANSPORTATION FUND SUMMARY				
Motor Fuels Normal	$189.88	$183.50	(3.4)%	$(10.50)
Motor Fuels Normal - Use	6.69	7.50	12.1	(3.30)
Motor Vehicle Usage	106.53	127.80	20.0	(10.45)
Motor Vehicle Rental Usage	3.41	3.50	2.6	(1.00)
Passenger Car License	20.91	18.00	(13.9)	(2.00)
Coal Severance - Road	0.00	21.75*	—	0.00
NEW TAXES				
Weight Distance	17.83	25.00	40.2	(10.20)
Overweight Permit	0.00	0.00	—	(3.10)
Other Transportation Fund	34.73	37.20	7.1	(1.05)
TOTAL TRANSPORTATION FUND	$379.98	$424.25	11.7%	$(41.60)

*By Finance Secretary's order in March 1983, $21.75 million is not be be transferred to the Transportation Fund; however, for comparison purposes, the September 1983 revision assumes that the transfer will be made.

SOURCE: Office of Revenue Estimating and Economic Analysis, Kentucky Revenue Cabinet.

prevail for the tax receipts collected by the Kentucky Revenue Cabinet.

Revised Revenue Estimates for 1983-84

The General Fund revised forecast of $2,334.01 million in 1983-84 represents a 5.7 percent rate of growth over actual receipts for 1982-83. This is $118.09 million less than the March 1983 estimate and a cumulative shortfall of $281.79 million from the official budget estimate prepared in May 1982.

The Transportation Fund revised forecast for 1983-84, $424.25 million, represents 11.7 percent growth over actual receipts for 1982-83. This is $11.12 million less than the March 1983 revised estimate and a cumulative shortfall of $41.60 million from the official budget estimate prepared in May 1982. Summary data for both funds are shown in Table 1.

Estimates for FY 1984 for each of the major taxes supporting the two funds are summarized in the table. As can be seen, most of these estimates are less than the revenues anticipated when the budget estimates were first made, for all of the reasons mentioned thusfar. For comparative purposes, the current estimate for the General Fund retains the $21.75 million in coal severance revenues that were not transferred to the Transportation Fund in FY 1983. Also, the property tax estimate includes the one-time benefit from the Automated Vehicle Identification System (AVIS) which will become effective in January, 1984. Finally, the upward revision in the inheritance and estate tax estimate primarily reflects the impact of Federal tax legislation.

Notes

[1]For example, the Data Resources, Inc. forecast for July 1983.

[2]Unfortunately, personal income data are only available through the first quarter of calendar 1983 and so precise comparisons between the two fiscal years cannot be made. These data are estimated by the Bureau of Economic Analysis, U.S. Department of Commerce.

[3]Richard Rosen, "Identifying States and Areas Prone to High and Low Unemployment," *Monthly Labor Review*, Volume 103, Number 3, March 1980, pp. 20-24 and Lynn E. Browne, "Two Years of Stagnation: Regional Perspective," *New England Economic Review*, September/October 1982.

[4]County-level income and employment estimates, comparable to national estimates, are current through data for 1981. County-level data for 1982 will not be available until April 1984. These data are estimated by the Bureau of Economic Analysis, U.S. Department of Commerce.

[5]See U.S. Forecast Summary, Data Resources, Inc., July 1983.

Kentucky Revenues in 1982-83 and the Outlook for 1983-84

by Lawrence K. Lynch*

Editor's Note: The following article is based upon testimony presented by the author to the Interim Committee on Appropriations and Revenue, Kentucky General Assembly, July 28, 1983.

The U.S. and Kentucky Economies

Real gross national product (RGNP) in the United States resumed growth in the first quarter, 1983, after suffering one of its most severe post-World War II recessions during 1981-82. The growth rate for the first quarter, 1983, was at an annual rate of 2.6 percent, followed by an acceleration to 9.7 percent in the second quarter. Much of the growth is centered in the defense industry; for example, in June, orders for durable goods in the U.S. grew by 5.5 percent, but only 1.2 percent when military orders are excluded. The national economic strength seems nonetheless to be broadly based, with strong improvements in automobile sales, housing and consumer spending. The Reagan administration expects that the recovery will continue, with RGNP growing by 5.5 percent for all of 1983.

Despite this news, state government tax revenues in Kentucky declined during the second quarter, 1983, when compared to the comparable period in 1982, resulting in a very poor financial year for Kentucky. Fiscal year (FY) 1983 ended with a shortfall in the General Fund. Receipts were nearly $150 million below the amount projected by the Revenue Cabinet in May 1982 and over $180 million below the author's July 1982 projections.[1] The Revenue Cabinet and the author both made downward adjustments on several occasions throughout the year for both their General Fund and the Transportation Fund estimates. Each time, the author assumed that an economic recovery was imminent, when in fact the recovery never came. This resulted in a shortfall of receipts below all his projections, as well as below the Revenue Cabinet's estimates.

Kentucky's total nonagricultural wage and salary employment grew by only 1.8 percent in the second quarter of 1983, and was 0.78 percent below the level of the second quarter, 1982. Coal mining employment was 7.0 percent below its 1982 level, manufacturing employment was 1.8 percent lower, and employment in transportation and public utilities was 6.6 percent lower. Only services employment showed a significant improvement, 2.3 percent higher. The seasonally unadjusted unemployment rate in Kentucky declined in recent months from a high of 12.7 percent in February to 11.2 percent in June 1983. However, the seasonally adjusted Kentucky unemployment rate grew from the February level of 10.8 percent to the June rate of 11.2 percent. These rates compare unfavorably with the seasonally adjusted U.S. civilian unemployment rates of 10.4 percent in February and just slightly below 10 percent in June.

The depression in the coal industry cannot account for all of Kentucky's lackluster economic behavior. Nationally, strong automobile sales, strong housing, and strong consumer spending should be helping Kentucky's economy and generating some revenue growth in sales and income taxes. But as noted above, revenue growth was dismal in the April-June quarter. Part of the explanation is that much of the U.S. growth is centered in the defense industry, in which Kentucky does not share. Perhaps another part of the explanation is the continuing shift of the nation's economy into the service-production rather than goods-production sectors, while Kentucky's economy is more goods-production oriented.

However, the national data report strength in nondefense goods-production industries, but this strength has not emerged in Kentucky. This leaves two perplexing questions. Will the U.S. economic expansion continue? And if it does, when will Kentucky begin to share in it?

Receipts, Fiscal Year 1983

Table 1 reports state government receipts for FY 1982 and FY 1983. Receipts shown for the individual income tax in FY 1982, as well as the General Fund total, have been adjusted upward by $19 million to reflect income tax refunds on 1980 income, due in FY 1981, but paid in FY 1982.

As can be seen in the third column of this table, FY 1983 General Fund receipts increased by 4.3 percent, and Transportation Fund receipts by only 0.1 percent. However, in order to measure the true economic growth of tax receipts during FY 1983, certain adjustments were made to account for audit collections resulting from the efforts of the Revenue Cabinet's additional auditors. These adjustments, shown in the fourth column of Table 1 were: Sales and Use tax, $18.1 million; Corporation Income tax, $6.9 million; and Coal Severance tax, $3.5 million; for a total of $28.5 million of revenue attributable to audit collections. In other words, had it not been for the unusually high audit collections, General Fund tax receipts would have been $28.5 million lower than the reported $2,208 million. A further adjustment was made to show the level of decline in coal severance tax receipts. During FY 1983, no coal severance tax receipts were transferred to the

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Transportation Fund; during FY 1982, $21.8 million had been transferred. Therefore, in the adjusted column, $21.8 million is subtracted from the General Fund and added to the Transportation Fund, and this allows analysis on a comparable year to year basis.

The last column of Table 1 shows the percentage change from FY 1982 to FY 1983 on the adjusted basis just described. The true economic growth in the General Fund was only 1.9 percent, with no growth in Sales and Use tax receipts, very slow growth in Individual Income tax receipts, and a very large decline in Coal Severance tax receipts. Moreover, there would have been no growth at all in the General Fund had the new liquor taxes and the Insurance Premium Surcharge not been enacted by the 1982 General Assembly.

The Transportation Fund performed slightly better than the General Fund, growing by 5.9 percent in FY 1983 on the comparable year-to-year or adjusted basis. Since coal severance monies were not transferred however, the actual growth of this fund was only 0.1 percent. Motor Vehicle Usage tax receipts grew by $6.9 million (6.7 percent), while Motor Fuels tax receipts declined by $2.5 million (2.7 percent). The new Weight Distance tax accounted for $17.8 million and was the primary offsetting factor that prevented an actual decline in the fund.

The Outlook for Fiscal Year 1984

The outlook for Kentucky receipts in 1983-84 depends upon the continuation of the U.S. economic recovery and the degree of Kentucky's participation in the recovery. Most economists believe that the U.S. economic gains will continue, albeit at a relatively slow growth rate, at least until the end of 1984. The major factor that could interrupt recovery is a surge in interest rates. Data Resources, Inc. (DRI) believes that high real interest rates will persist in 1984 and 1985 due to three factors: a) continued federal deficits of about $200 billion per year, b) persistent expectations of renewed inflation, and c) financial instability, especially among Third World debtor nations.[2]

High real interest rates will make business investment a weak component of the recovery, and will also keep the dollar strong, hurting exports. The strongest components of the recovery will be military spending and consumption. Since Kentucky needs new investment to create growth, and has a weak military sector, its participation in the U.S. recovery may be weaker than in the past. Further, the expected low inflation rate, while good news for consumers, will hurt tax revenue growth. In principle, the lower rate of inflation should also mean lower costs for government, suggesting that a reduction in the rate of inflation could justify slower budget growth without any effect on the level of "real" expenditures.

TABLE 1

GENERAL FUND RECEIPTS AND TRANSPORTATION FUND TAX RECEIPTS, FISCAL YEARS, 1982 AND 1983

Tax Source	FY 1982 (Millions)	FY 1983 (Millions)	Percent Change FY 1982-FY 1983	Adjusted FY 1983 (Millions)	Percent Change
Sales and Use	$ 682.2	$ 700.2	2.6%	$ 682.1	-0.0%
Individual Income	619.8*	647.2	4.4*	647.2	4.4
Corporation Income	166.8	172.1	3.2	165.2	-1.0
Coal Severance	237.9	201.8	-15.2	198.3	-16.6
Less Transfer	(21.8)	(0.0)	—	(21.8)	—
Minerals and Gas Severance	8.8	8.9	1.1	8.9	1.1
New Liquor Taxes	—	34.2	—	34.2	—
Insurance Premium Surcharge	—	6.9	—	6.9	—
Other General Fund, including Non-tax Receipts	423.8	436.7	3.0	436.7	3.0
TOTAL GENERAL FUND	$2,117.5*	$2,208.0	4.3%*	$2,157.7	1.9%
Motor Fuels	$202.1	$196.6	-2.7%	$196.6	-2.7%
Motor Vehicle Usage	103.0	109.9	6.7	109.9	6.7
Coal Severance	21.8	0.0	—	21.8	—
Weight-Distance	—	17.8	—	17.8	—
Overweight Coal Trucks	—	0.0	—	0.0	—
Other Transportation Fund	51.1	54.2	6.1	54.2	6.1
TOTAL TAX RECEIPTS, STATE ROAD FUND	$378.0	$378.5	0.1%	$400.3	5.9%

*Adjusted to reflect $19.0 million in refunds carried over from FY 1981 into FY 1982 and paid in July 1981.

SOURCE: Kentucky Revenue Cabinet, "Kentucky State Government Revenue," Vol. 25, No. 12.

In order to revise estimates of Kentucky revenues for FY 1984, the author used the national economic assumptions of the DRI Control Solution of July 1983:

1. RGNP growth of 3.0 percent for calendar 1983, 4.6 percent for 1984;
2. Inflation rates (as measured by the GNP implicit deflator) of 4.6 percent in 1983 and 4.2 percent in 1984;
3. U.S. unemployment rates averaging 9.7 percent in 1983 and 8.7 percent in 1984;
4. Interest rates that remain, with fluctuations, at about their current levels in 1983 and 1984;
5. U.S. personal income growth of 6.5 percent in 1983 and 8.7 percent in 1984.[3]

During the period 1978 through 1982, Kentucky's personal income grew by an average of 1.4 percent per year below the U.S. rate.[4] If this trend persists, and there is little reason to expect that it will not, Kentucky personal income will grow by only 5.1 percent in 1983, and 7.3 percent in 1984. In addition, Kentucky's seasonally adjusted unemployment rate is expected to remain about 0.5 to 1.0 point above the U.S. rate.

TABLE 2

JULY 1983 LYNCH REVISED ESTIMATES OF FISCAL YEAR 1984 REVENUES

Tax Source	Estimates of FY 1984 Receipts (Millions)	Estimated Growth FY 1983-FY 1984
Sales and Use	$ 735.00	5.0%
Individual Income	693.8	7.2
Corporation Income	183.5	6.6
Coal Severance	215.3	6.7
Minerals and Gas Severance	9.4	5.6
New Liquor Taxes	35.9	5.0
Other General Fund	457.2	3.1
TOTAL GENERAL FUND	$2,330.1	5.5%
Motor Fuels	$210.4	7.0%
Motor Vehicle Usage	117.0	6.5%
Weight-Distance	18.7	5.1
Other Transportation Fund	56.9	5.0
TOTAL TAX RECEIPTS, STATE ROAD FUND	$403.0	6.5%

SOURCE: Estimates made by the author.

Revised Revenue Estimates for FY 1984

The author applied his elasticity model for all major taxes, using the elasticity coefficients estimated in the Fall of 1981.[5] These coefficients will be reestimated in the Fall of 1983, following the availability of revised data. Several other steps were taken to adjust for the audit collections reported above.[6] In addition, the Minerals and Gas Severance tax, the new liquor taxes, and the Weight Distance tax were all assigned elasticity coefficients of 1.0. That is, their receipts were estimated to grow at the same rate as personal income. Motor Fuels tax receipts were estimated to grow by 7.0 percent (3.0 percent in gallonage and 4.0 percent growth in price). Other Transportation Fund tax receipts were estimated to grow at their historical average growth rate of 5.0 percent. The Insurance Premium Surcharge expired at the end of FY 1983, so $6.9 million of revenue in FY 1983 will not recur in FY 1984. Finally, it was assumed, for purposes of these revised revenue estimates, that no Coal Severance tax receipts would be transferred from the General Fund to the Transportation Fund in FY 1984.

The revised revenue estimates for FY 1984 are shown in Table 2. The estimate for the General Fund, $2330.1 million, is $366.6 million (13.6 percent) below the author's estimate for FY 1984 made in July 1982.[7] While enormous, this reduction is realistic in light of several factors that have occurred during the past year: a much lower revenue base than expected for FY 1983 (lower by $184.6 million); and a much slower rate of growth in personal income than was then anticipated, due in part to a lower rate of inflation. The Transportation Fund is expected to grow by 6.5 percent to $403.0 million, $88.1 million (17.9 percent) below last summer's expectations.

In conclusion, it is clear that the revenue estimates for FY 1984, as revised and presented here, represent severe reductions from earlier expectations and will present severe budgetary problems for Kentucky state government in this second year of the 1982-84 biennium. The downward revisions are the result of a sharper than expected reduction in inflation, and a persistently sluggish Kentucky economy.

Notes

[1]Richard Thalheimer and William B. Gardner II, "Kentucky Revenues in 1981-82 and a Tentative Outlook for 1982-83," and Lawrence K. Lynch, "Renewed Growth in Kentucky Tax Revenues," *Kentucky Economy: Review & Perspective*, Vol. 6, No. 3 (September 1982), pp. 10-14.

[2]Data Resources, Inc., *Review of the U.S. Economy*, July 1983.

[3]*Ibid.*

[4]Bureau of Economic Analysis, U.S. Department of Commerce (April 1983), through the Kentucky Economic Information System (KEIS).

[5]The author's elasticity model was discussed in his "The Outlook for Kentucky Tax Revenues," *Kentucky Economy: Review & Perspective*, Vol. 4, No. 2 (June 1980), pp. 10-11.

[6]The procedure used was as follows:

a) audit receipts in FY 1983, if any, were subtracted from FY 1983 total receipts, for each tax;
b) the elasticity factor was applied to the expected 1983 growth rate of personal income—5.1 percent—to yield an estimated percentage increase in revenue for FY 1984;
c) the percentage increase was multiplied by audit-adjusted FY 1983 receipts; and
d) additional audit receipts expected for FY 1984 (assumed to remain at their FY 1983 level) were added in.

For example, the Sales and Use tax estimate was:

83 Receipts	Additional Audits	PI Growth Rate	E	Additional Audits	
(700.2 −	18.1)	x (1 + (.051 x .9987))	+	18.1	= 735.0

[7]Lynch, 1982, p. 11.

RELATIVE GROWTH IN PERSONAL INCOME, POPULATION, AND PER CAPITA PERSONAL INCOME, 1979-82

Region	Personal Income (Millions of Current $) 1979	1982	% Change 1979-82	Population, July 1 (Thousands of Persons) 1979	1982	% Change 1979-82	Per Capita Personal Income (Current $) 1979	1982	% Change 1979-82	% of U.S. Average 1982
United States	$1,943,983	$2,571,592	32.3	224,569	231,534	3.1	$8,657	$11,107	28.3	—
Far West	296,783	397,703	34.0	30,611	32,498	6.2	9,695	12,238	26.2	110
Mideast	387,880	513,248	32.3	42,358	42,461	.2	9,157	12,087	32.0	109
New England	110,039	148,868	35.3	12,345	12,493	1.2	8,913	11,916	33.7	107
Southwest	173,169	252,206	45.6	20,777	22,677	9.1	8,335	11,122	33.4	100
Great Lakes	378,960	459,698	21.3	41,611	41,585	-.1	9,107	11,055	21.4	100
Plains	147,267	187,104	27.1	17,097	17,342	1.4	8,614	10,789	25.2	97
Rocky Mountain	52,998	73,837	39.3	6,439	6,866	6.6	8,231	10,754	30.7	97
Southeast	**383,591**	**520,232**	**35.6**	**51,977**	**54,180**	**4.2**	**7,380**	**9,602**	**30.1**	**86**
Alabama	26,458	34,101	28.9	3,869	3,943	1.9	6,838	8,649	26.5	78
Arkansas	15,305	19,430	27.0	2,269	2,291	1.0	6,745	8,479	25.7	76
Florida	77,673	114,347	47.2	9,471	10,416	10.0	8,202	10,978	33.8	99
Georgia	39,732	54,035	36.0	5,391	5,639	4.6	7,370	9,583	30.0	86
Kentucky	**25,941**	**32,762**	**26.3**	**3,644**	**3,667**	**.6**	**7,119**	**8,934**	**25.5**	**80**
Louisiana	30,791	44,633	45.0	4,139	4,362	5.4	7,439	10,231	37.5	92
Mississippi	15,358	19,840	29.2	2,508	2,551	1.7	6,124	7,778	27.0	70
North Carolina	41,336	54,431	31.7	5,802	6,019	3.7	7,125	9,044	26.9	81
South Carolina	20,548	27,231	32.5	3,087	3,203	3.8	6,657	8,502	27.7	77
Tennessee	31,979	41,420	29.5	4,533	4,651	2.6	7,054	8,906	26.3	80
Virginia	44,752	60,923	36.1	5,325	5,491	3.1	8,405	11,095	32.0	100
West Virginia	13,718	17,078	24.5	1,939	1,948	.5	7,075	8,769	23.9	79

NOTE: Personal income is the income received by persons from all sources, that is, from participation in production, from transfer payments from government and business, and from government interest, which is treated like a transfer payment. Personal income is the sum of private and government wage and salary disbursements, other labor income, farm and nonfarm proprietors' income, rental income of persons, personal dividend income, personal interest income, and transfer payments, less personal contributions for social insurance. Personal income is measured before the deduction of personal income taxes and other personal taxes and is reported in current dollars (no adjustment is made for price changes).

Per capita personal income is the total income of residents (for the year) divided by the resident population as of July 1.

SOURCE: United States Department of Commerce, Bureau of Economic Analysis, COMMERCE NEWS (BEA 83-47), September 6, 1983.

Kentucky Economy: Review & Perspective
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KENTUCKY ECONOMY
Review & Perspective

THE KENTUCKY COUNCIL OF ECONOMIC ADVISORS
University of Kentucky, Lexington, Kentucky 40506-0047

December 1983
Vol. 7, No. 4

KCEA Review and Forecast

by Charles W. Hultman*

The strength of national economic recovery and the extent to which it will affect developments in the Commonwealth are of major interest to Kentuckians. These two factors have an important bearing on the ability of the public and private sectors of the Kentucky economy to bring increases in production, employment, consumer incomes, and tax revenues.

The strength of national economic recovery. Real gross national product (GNP) is projected by Data Resources Inc. (from the December, 1983 forecast), to have increased at a moderate rate of about 3.4 percent in 1983, the first full year of expansion following the upturn in late 1982. This growth rate is impressive when compared with a 1.9 percent decline in real output in 1982; it is approximately in line with a composite of seven previous cycles of the post World War II period.

The moderate growth rate of 1983 is the result of several offsetting factors including a backlog of demand that stimulated purchases of housing and cars; a high level of interest rates that depressed consumer and business spending; a large federal deficit that affected business confidence; and the failure of growth in several key industries to bring expected effects in many related industries. Much of the national economic growth occurred as a result of higher consumer expenditures, increased inventory investment, expanded residential construction, and increased defense spending. A negative influence was exerted by the decline in the net export position of the United States.

National recovery is projected to continue with real GNP rising at a 5.4 percent rate in 1984 and a more moderate 3.2 percent rate in 1985. Unemployment would decline gradually from a 9.5 percent rate in 1983 to 8.1 percent in 1984 and 7.7 percent in 1985. The inflation rate (as measured by the Consumer Price Index) would rise slightly to almost 5 percent in 1984 and 1985 as compared with about 3.2 percent in 1983. The federal budget deficit is potentially a more serious problem at a projected figure of $174 billion in 1984 and $192 billion in 1985.

Implications for Kentucky. Improvement is evident in the Kentucky economy although the recovery is not as strong as that reflected in the national economy. State tax receipts, including individual income and sales receipts, have increased somewhat—an indication of a rising level of income and demand. Increased activity is also apparent in house construction and the automobile and related industries.

Although Kentucky's unadjusted monthly unemployment rate showed improvement during much of 1983, the unemployment rate has actually increased since the beginning of 1983 if allowances are made for seasonal factors. The adjusted monthly rate has increased gradually every month from 10.59 percent in January of 1983 to 11.53 percent in September of 1983. In addition, total employment of residents in the state was down about 2 percent for the third quarter of 1983 as compared with the equivalent quarter for 1982.

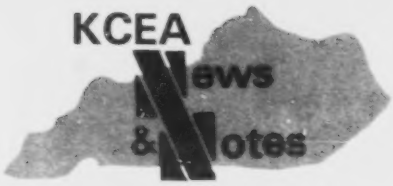
The insured unemployment rate (both adjusted and unadjusted) declined during 1983. However, a decline in the covered employment since the beginning of the year suggests that many workers exhausted their unemployment benefits and subsequently have not been able to find new jobs.

A slow improvement in labor usage is not unusual during periods of economic recovery and seems to have characterized Kentucky during much of 1983. However, it is expected that sustained national recovery, which is suggested by various indicators including the Composite Index of Leading Indicators, will lead to a declining share of Kentuckians remaining unemployed in 1984 and 1985.

The long term growth potential available to Kentucky and to the nation is suggested by recently-released Bureau of Labor Statistics projections (*Monthly Labor Review*, November 1983) (Table 1). If Kentucky follows the national trend through the mid 1990s, over one half of the new jobs created (during the period 1982-1995) will be in wholesale and retail trade and in "other" services. The latter category is a miscellaneous services sector which includes medical care, business services, professional services, hotels and personal services. Manufacturing employment will expand

(continued on page 10)

Charles W. Hultman is Chairman of the KCEA and Associate Dean for Research and Extension, College of Business and Economics, University of Kentucky.



Professor Charles W. Hultman, who has served as Chairman of the Kentucky Council of Economic Advisors (KCEA) and Associate Dean for Research and Extension of the College of Business and Economics, University of Kentucky, since 1976, has resigned from these positions, effective January 1, 1984. Professor Hultman returns to full-time teaching and research in the Department of Economics, University of Kentucky.

During the past seven and a half years, the KCEA has contributed a range of services to the Commonwealth. With Dr. Hultman's support and participation, this quarterly publication, *Kentucky Economy: Review & Perspective*, was initiated; numerous aspects of the Kentucky economy have been analyzed in the *Annual Reports*, *Policy Papers*, and *Studies in Applied Economic Research* series; the Kentucky Economic Information System became a publicly accessible resource; and a variety of research projects were undertaken and the results disseminated.

The staff of the KCEA extends its appreciation and best wishes to Dr. Hultman.

* * *

The composition of the 1983 *Annual Report* of the Kentucky Council of Economic Advisors has been completed and the volume is in the final stages of technical preparation as this issue of *Review & Perspective* goes to press. The 1983 report has been written by Dr. Don M. Soule, with the assistance of Frances E. Ross. Dr. Soule has designed a new format for the report, which is divided into thirteen sections. These cover most of the major aspects of the Kentucky economy, and some aspects of the regional economies of the Commonwealth, for the thirteen year period, 1970-82. Each section has text, data tables, and computer-produced graphical illustrations of the data.

An order form for the *Kentucky Council of Economic Advisors Annual Report—1983* can be found on page 12 following. Single copies of the *Annual Report* will be furnished, upon request, at no charge to persons in government, academia, media, or in the nonprofit sector. There will be a charge of $10.00 per copy, for all copies sent to persons in the for-profit private sector, and for all copies sent to all others beyond the first complimentary copy.

* * *

Dr. Merlin M. Hackbart, Professor of Economics and Public Administration, University of Kentucky, has been named by Dean Richard W. Furst, College of Business and Economics, to the newly defined position of Associate Dean for Graduate Studies and Research of the College of Business and Economics, University of Kentucky, effective January 1, 1984. Professor Hackbart will also serve as Chairman of the KCEA.

Professor Hackbart received the PhD in Economics from Kansas State University in 1968 and came to the University of Kentucky in 1973. Since coming to the University, Dr. Hackbart has served in various capacities including Executive Director of the KCEA and Director of the James W. Martin Center for Public Administration. Most recently

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KENTUCKY ECONOMY: Review & Perspective

Published quarterly by the
Kentucky Council of Economic Advisors (KCEA)
302 Mathews Building, University of Kentucky
Lexington, Kentucky 40506-0047 (606) 257-7675

ISSN 0270-1421
OCLC: 5289744

This publication provides current information concerning the Kentucky economy. It is a forum for the publication of short expository articles, analyses of some aspect of the Kentucky economy, forecasts of the Kentucky economy, and tables of selected data chosen as indicators of developments in the Kentucky and national economies. The publication also sometimes includes information about enhancements to the Kentucky Economic Information System (KEIS) and articles dealing with information systems in general.

Articles submitted for publication should be sent to the Editor at the address given above. All submissions will be reviewed independently by persons recognized as knowledgeable in the specific subject discussed. However, the ultimate responsibility for content rests with the author.

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Editor: Margaret O'Neill Adams. Publication Staff: Carol Abbott, Shearle Furnish, Mark Lunn, Yee Ling Mui, Frances E. Ross, Roy A. Sigafus, Dorisa A. Slaughter, Elsie M. Youmans. Printed with state funds at the Printing Services Department, University of Kentucky.

The KCEA is a state government agency, staff support for which is provided by the Center for Applied Economic Research, a unit of the Office for Research and Extension, College of Business and Economics, University of Kentucky. Richard W. Furst, Dean of the College of Business and Economics.

KENTUCKY EDUCATIONAL FINANCE: METHODS and PROBLEMS

by Don M. Soule*

Complete local government financing of education results in great inequality among localities in the amount, type, and quality of service, mainly because taxable values differ widely among localities in terms of averages per pupil. Also, the strength of desire for educational services may vary among districts. But even if the desire were equally strong among districts, the very large differences in taxable values per pupil would result in unequal service. Over the years, as the need for less inequality of educational service was recognized over entire states, support arose for giving state aid to local school districts. By the early 1950s, Kentucky had a state aid program that gave an equal number of dollars per pupil among districts. Kentucky later adopted a minimum foundation program and fully financed it following adoption of the sales tax, effective July 1, 1960.

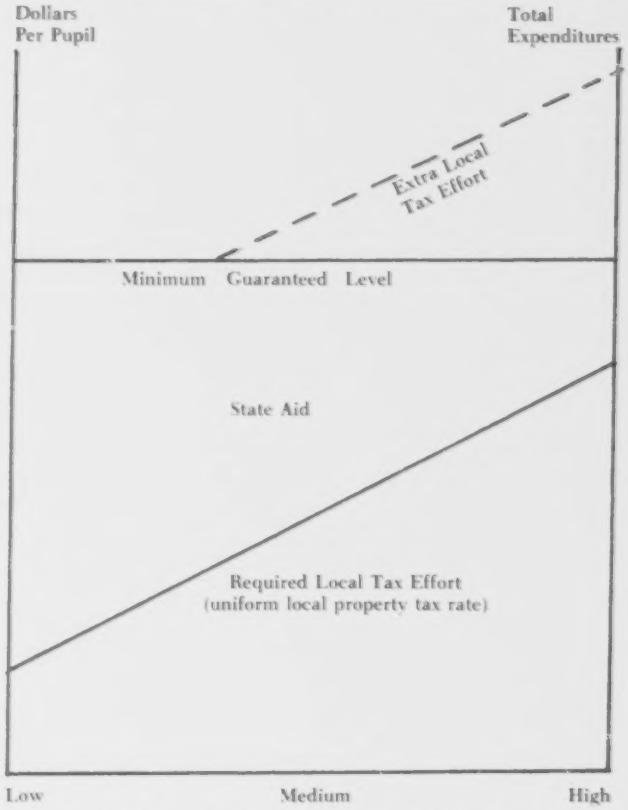
This brief review of Kentucky educational finance describes the minimum foundation program and identifies problem areas as they relate to the objective of reducing the degree to which educational services are provided unequally among local areas that differ in economic ability and among students whose educational needs differ in amount, type, and cost.[1] This review is intended not as a policy proposal but instead as background information for public discussion.

Minimum foundation program

The minimum foundation method was developed early in this century and has been widely adopted among states. The basic original plan was: to establish a state guaranteed floor of expenditures, per pupil, throughout the state; to finance part of the program by a local tax on property that was uniform among localities in percentage rate but not, of course, in dollars of local revenue produced per pupil; and to supplement the locally raised revenue by state aid sufficient to raise the locally available revenues (local plus state) to the state guaranteed level of expenditures.

The basic method of a minimum foundation program is illustrated in Figure 1. The horizontal axis shows school districts arrayed from low to high according to the per pupil value of taxable property, with property comparably valued at estimated market value. The vertical axes show locally produced revenue, state aid, and the state minimum guaranteed level of expenditures. Note that in the "poor" districts, most of the minimum guaranteed level of expenditures is financed from state aid and very little from the local property tax. The opposite is true in the "rich" districts. A uniform percentage tax rate produces greatly different amounts of revenue per pupil among districts. Note also that even the rich districts receive some state aid. This probably has two purposes. One is to gather voter support while the other is to supplement local taxation with state taxation in all districts.

FIGURE 1—A TYPICAL MINIMUM FOUNDATION PROGRAM*



School Districts Arrayed from Low to High According to Per Pupil Value of Taxable Property

*Actual foundation programs vary among states.

Also note in Figure 1 that total expenditures among districts are not at the minimum guaranteed level but instead are higher than that level in some districts. Minimum foundation programs often allow school districts to make additional expenditures provided that local tax revenue exceeds the required local effort. (Also, expenditures from federal-to-local aid is in addition to local and state funds.) This "extra local effort" typically is voluntary on the part of the district, is not supplemented by state aid, and is used to provide "enrichment" services. In Kentucky, some of the extra local tax effort is supplemented by state aid in the "power equalization" program adopted in 1976. This program is explained later in the text.

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The main advantages of a minimum foundation program are that it raises the level of expenditures, uses state taxes as well as local taxes, and achieves uniform educational expenditures among localities *at the guaranteed minimum*. The income redistributional (equalizational) effects of this method deserve special explanation. Funds are in effect transferred from richer to poorer districts by two separate and distinct forces. The first cause of equalization is obvious—the amounts of state aid per pupil vary widely among districts and in favor of the poorer districts. The other cause of equalization is very important but not at all obvious. The state funds used for aid are raised by state tax laws that are applied uniformly throughout the state. But these uniformly applied state tax laws produce amounts of tax revenue, per pupil, that differ widely among the school districts. Consequently, a poor district that receives most of its educational funds from state aid may contribute very little, per pupil, to the state tax revenue used to pay the aid. At the extreme, a district could be so poor as to generate virtually no local or state government tax revenue from its citizens and businesses while receiving almost all of its educational budget from state aid.

Deficiencies in Kentucky's Minimum Foundation Program. While adoption of the minimum foundation program was a great step forward for Kentucky, there nevertheless were many remaining deficiencies and inadequacies, some of which were remedied in later years. These problem areas are briefly described.

(1) The basic unit for measurement in the Kentucky program is the classroom unit whereas in some other states the pupil is the basic unit. The per pupil method is thought to be superior in several respects, such as: greater precision because the unit of measurement is smaller, and greater ease in recognizing the differences that exist between types of students in both the need for services and the costs of these services. Also, use of the classroom unit method has been associated with the "closed" instead of "open" ended nature of some special programs, a problem that is discussed later.

(2) Costs of providing the guaranteed minimum level of services tend to increase over the years, especially with inflation, and the various dollar definitions in the program therefore are adjusted upward over the years. But insofar as these adjustments are inadequate, the amount of service provided by the guaranteed minimum expenditure level tends to fall.

(3) Uniformity at the guaranteed minimum level is in terms of dollars of expenditure per classroom unit. Educational service at the minimum level would be uniform among districts (per classroom unit) only if educational costs were equal among districts. But insofar as costs differ among districts in providing the same amount, type, and quality of service, uniformity of expenditures can result in nonuniformity of services. It seems reasonable to expect that the ingredients of educational service vary in price among local areas in Kentucky because price differences are found for many of the goods and services purchased by households and businesses. But attempts to identify and measure these alleged cost differences have given unsatisfactory results, and to date there have been few if any adjustments in the Kentucky program for these possible cost differences. The effects of this imprecision are partly avoided by allowing local school districts to make additional local expenditures above the guaranteed minimum if financed from extra local tax revenue. That is, additional need for expenditures might be caused by higher costs for identical service, and this may cause local districts to put forth extra local tax effort.

(4) Another controversial area concerns possible differences in needs for service, among districts. Suppose, for example, that one district has students who live in low value homes and have parents with limited educational opportunity, whose work requires little educational attainment, and pays lower wages, while another district has students who live in more luxurious homes and have college educated parents earning higher salaries. These two groups of students would differ not only in the quality of facilities to which they are accustomed but also, it could be argued, probably will differ in educational background, outlook, and in types of work in later life. These differences could allow some critics to argue, therefore, that identical educational service (amount, type, and quality) would not be appropriate.

A program completely financed by state government probably could not legally (constitutionally) provide unequal service among districts, even if such were desirable. And even if possible, how could the proper differences be determined? The problem thus presented can be likened to the case of a family wishing to entertain both its rich and poor relatives at dinner. If all are entertained at the same dinner party, it would be difficult not to have the same menu. But if the two groups are invited to different parties, one dinner could feature steak and the other a casserole.

In educational finance, the public's solution to this problem has been to allow local districts to provide whatever additional services they desire, provided they raise extra tax revenue. Thus, the state guaranteed program is funded equally among districts; whatever inequality exists is the result of unequal local tax effort; and local government differences are not regarded as violating the state constitution. In defense of this method, it can be said that a traditional function of the rich has been to set standards for those who would imitate them. Over the years, residents of poor districts can demand, through legislation, that their public schools be adjusted upward toward levels felt proper in the rich districts.

(5) The minimum foundation program, in most respects, assumes that the need for educational services is identical among students. But obvious differences exist, such as: grade levels; vocational education; mentally or physically handicapped students; and culturally deprived students. Over the years, the Kentucky program has been modified because of these differences. Some recognition has been made for grade differences, and quite a bit of adjustment has been made for vocational education and for special education programs for the handicapped. Little attention has been given to culturally deprived students. Expenditure increases have been noteworthy for the vocational and special education programs, but deficiencies have been

associated with the "closed-end" nature of the financing method. This is explained.

Using special education as an example, Kentucky's method for financing these units has been to provide funds for a particular total number of special classroom units for the entire state for a budget period. These units were assigned to particular school districts which both provided the service and received the state aid. There potentially could be students with special needs who did not attend special programs because there were not enough such units to accommodate all students. Students sometimes were required to commute among districts to attend special programs.

An alternate method for financing these units is to define special classroom units in terms of size, programs, and guaranteed expenditures and to provide funds to any and all districts for as many classroom units as they can populate with special students. This, however, is an "open-ended" program with regards to financing. The state government does not know in advance how much the special education program will cost for the budget period, and any school district can get more state money by finding special students who previously had not been served. Kentucky has in recent years moved toward the open-ended type of special and vocational education programs; more dollars have been made available for these students by the method of defining a special or vocational classroom unit as consisting of fewer students than the regular units. It is still recognized, however, that a conflict exists between students' needs for service and the state government's need for expenditure planning and control.

Another aspect of the special unit programs has been the alleged practice of reducing the number of special units assigned to some districts (usually the richer ones) that already had special units financed from extra local tax revenue. This practice, it is alleged, placed a penalty on districts that had provided more and better services by establishing programs before other districts had them or before the state recognized the needs by including these services in the minimum foundation program. (Note that the term "alleged" is used above because good-faith differences of opinion exist regarding interpretation of these conditions.)

Adjustments to the original foundation program. Over the years, the Kentucky minimum foundation program has been modified in many ways, some of which are quite important and so are discussed here.

(1) As a result of legislative changes in 1966, school districts were allowed to increase their locally raised tax revenue by taxes other than the property tax. Three "permissive" taxes were provided, although a particular locality could use only one of the three taxes (up to 0.5 percent occupational license tax; up to 20 percent tax based on the taxpayer's state income tax amount; and up to 3 percent tax based on the customers' utility bills). Most districts choosing one of these taxes have selected the utility tax because of its much greater ease of administration. The revenues from these taxes could not be counted in the "required local effort" and they were not matched with state aid, under the original foundation program. Some support has been shown recently for allowing districts to use more than one of these taxes, but no permission has been legislated.

(2) The former required local tax effort, which was essentially a uniform percentage of the estimated market value of taxable property, was changed effective in fiscal year 1978 to a state tax defined as 30 cents per $100 of taxable property value. (This state property tax is deposited into the state's General Fund and is not earmarked for school purposes. Also, expenditures above the state guarantee can still be financed from local tax revenue and from federal-to-local aid.) There was no change apparent to the individual taxpayer because of this legislation because total (state plus local) tax liabilities were generally unchanged. But replacing the local required effort with the state property tax caused the foundation program to be totally financed from state revenue. Also, it became easier to recognize which school districts have low or high property tax rates. For example, a district that previously had a school property tax rate of 35 cents is reported as having a rate of only 5 cents.

(3) Property tax rate limits have existed in Kentucky for generations, but two important changes were made in the last two decades. Around 1965, when the courts ruled that assessed values of property be raised to full market value, the General Assembly required that the property tax rate in each locality could not produce more revenue under the new and higher taxable values than under the former values. (These rolled-back rates could be increased by 10 percent in each of two years, although not all local governments chose to make those increases.)

Another set of rate limits was introduced by House Bill 44 in the 1979 Special Session of the General Assembly. This bill established a continuing method for downward adjustment in property tax rates. Under this program, the increased taxable value assigned to previously taxed real property cannot be the cause of tax revenue increases in excess of 4 percent. Each year, in order to set the property tax rate, the first step is to compute a rate (the compensating rate) that would produce the same amount of total revenue as in the previous year from "old" real property (that is, real property on the rolls in both years and unchanged except for higher values). With assessed values being raised to keep up with rising market values, the application of unchanged tax rates might cause property tax revenues to increase by, for example, 10 percent per year. But with House Bill 44, the tax rate effectively is reduced to provide for unchanged revenue from old real property. Then, however, a locality can choose to increase this compensating rate to produce as much as 4 percent increased revenue from old real property, provided a hearing is held. To raise the rate by more than 4 percent requires voter approval at an election. These tax rates are applied to both old and new real property.

The purpose of House Bill 44 was to prevent what were interpreted to be excessive increases in property tax liabilities caused by large, market-determined increases in property values. But the practical result is that both state

(continued on page 8)

selected indicators OF ECONOMIC A

These tables of selected indicators of economic activity were prepared by a special-purpose program of the Kentucky Economic Information System. The data in the tables are reported figures which were obtained from a variety of state and federal agencies, as well as from private firms.

UNITED STATES DATA

	July 1983	Aug. 1983	Sept. 1983	Qtr. III 1983	% Chg. 83-II 83-III	% Chg. 82-III 83-III
CONSUMER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)						
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, NEW DEFINITION	299.40	300.30	301.00	300.47	1.20	NA
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, FOOD AND BEVERAGES	284.70	284.90	285.30	284.97	0.03	1.68
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, HOUSING (INCL RENTAL EQUIV)	324.50	324.80	326.40	325.23	1.09	NA
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, APPAREL AND UPKEEP	193.00	193.50	200.40	192.57	0.94	2.85
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, TRANSPORTATION	300.30	302.40	303.20	302.17	2.23	2.13
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, MEDICAL	357.70	360.00	361.20	359.63	1.40	5.97
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, ENTERTAINMENT	246.00	246.60	246.50	246.70	0.77	4.98
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, OTHER	290.50	289.80	294.40	290.30	2.30	11.35
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, SPECIAL INDEX: ENERGY	430.10	429.00	429.30	429.73	2.43	1.26
PRODUCER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)						
PRODUCER PRICE INDEX, ALL COMMODITIES	303.00	304.90	305.50	304.47	0.98	1.50
PRODUCER PRICE INDEX, ALL FINISHED GOODS	285.70	284.20	285.10	285.63	0.54	1.36
PRODUCER PRICE INDEX, FINISHED CONSUMER GOODS	285.20	285.60	285.20	285.30	0.63	1.07
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS	313.50	314.40	315.20	314.37	1.44	3.15
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS FOR MANUFACTURING	293.40	294.00	294.30	294.83	1.05	3.92
PRODUCER PRICE INDEX, CRUDE MATERIALS	320.60	326.40	328.30	325.27	5.09	1.77
PRODUCER PRICE INDEX, CRUDE FOODSTUFFS AND FEEDSTUFFS	249.00	259.00	254.40	254.20	0.37	3.95
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, SPOT(1967=100)	439.00	444.10	446.00	442.97	4.48	0.67
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, CONTRACT(JUNE76=100)	150.40	149.40	150.20	150.00	0.40	0.87
CONSUMER PRICES: ENERGY (U.S. CITY AVERAGE)						
AVG PRICE FOR UTILITY (PIPED) GAS, PER 40 THERMS	27.15	27.15	27.40	27.29	0.37	16.76
AVG PRICE FOR UTILITY (PIPED) GAS, PER 100 THERMS	64.60	64.53	64.95	64.69	1.10	16.97
AVG PRICE FOR ELECTRICITY, PER 500 KWH	39.52	39.59	39.80	39.56	4.15	1.07
AVG PRICE FOR FUEL OIL #2 (HOME HEATING OIL), PER GALLON	1.08	1.08	1.09	1.08	0.00	9.09
AVG PRICE, GASOLINE, ALL TYPES, PER GALLON	1.27	1.27	1.26	1.27	2.59	3.19
AVG PRICE, GASOLINE, LEADED REGULAR, PER GALLON	1.20	1.20	1.19	1.20	2.68	4.10
AVG PRICE, GASOLINE, UNLEADED REGULAR, PER GALLON	1.28	1.28	1.28	1.28	2.56	2.40
AVG PRICE, GASOLINE, LEADED PREMIUM, PER GALLON	1.44	1.44	1.40	1.43	1.93	1.40
LABOR FORCE (SEASONALLY ADJUSTED, MILLIONS OF PERSONS)						
LABOR FORCE, TOTAL (INCL RES ARMED FORCES)	114.54	113.94	114.06	113.85	0.91	0.91
LABOR FORCE, CIVILIAN (EXCL RES ARMED FORCES)	111.87	112.28	112.37	112.17	0.91	1.39
EMPLOYMENT, RESIDENT ARMED FORCES	1.66	1.66	1.69	1.68	0.66	0.18
EMPLOYMENT, TOTAL CIVILIAN BY RESIDENCE (EXCL ARMED FORCES)	101.29	101.55	101.94	101.60	1.67	2.00
EMPLOYMENT, AGRICULTURE	3.53	3.49	3.29	3.44	0.45	0.67
EMPLOYMENT, NONAGRICULTURAL	97.76	98.07	98.65	98.16	1.71	2.05
UNEMPLOYED, CIVILIAN, TOTAL	10.59	10.20	10.42	10.57	5.80	4.12
UNEMPLOYMENT RATE, TOTAL LABOR FORCE	9.30	9.40	9.19	9.28	6.65	4.98
UNEMPLOYMENT RATE, CIVILIAN LABOR FORCE	9.43	9.53	9.28	9.42	6.65	5.41
OTHER SELECTED NATIONAL INDICATORS:						
U.S. GROSS NATIONAL PRODUCT (B $) (% CHG AT ANNUAL RATE)	NA	NA	NA	3362.20	11.50	8.78
U.S. REAL GROSS NATIONAL PRODUCT (B 72$) (% CHG AT ANNUAL RATE)	NA	NA	NA	1553.40	7.65	4.56
PERSONAL INCOME, TOTAL, SEASONALLY ADJUSTED (B $)	2754.00	2754.40	2781.60	2761.90	11.17	6.58
COMPOSITE INDEX OF 12 LEADING INDICATORS (1967=100)	159.70	158.90	160.20	159.10	2.80	16.47
INDEX OF INDUSTRIAL PRODUCTION, SEASONALLY ADJUSTED (1967=100)	149.70	151.00	153.90	151.80	5.08	9.67
INTEREST RATE, YIELD ON 3-MONTH TREASURY BILLS	9.11	9.39	9.05	9.19	9.11	5.37
PRIVATE HOUSING UNITS AUTH, 16000 PERMIT-ISSUING PLACES (SADJ THOU)	1700.00	1662.00	1578.00	1646.67	0.65	43.47
TOTAL INSTALLMENT CREDIT OUTSTANDING AT END OF MONTH (B $)	359.60	363.60	367.60	367.60	4.13	9.93

ACTIVITY

KENTUCKY DATA

	July 1983	Aug. 1983	Sept. 1983	Qtr. III 1983	% Chg. 83-II 83-III	% Chg. 82-III 83-III
LABOR FORCE (NOT SEASONALLY ADJUSTED, THOUSANDS)						
LABOR FORCE, TOTAL CIVILIAN	1637.70	1647.90	1658.10	1646.57	0.73	1.87
EMPLOYMENT, TOTAL, BY PLACE OF RESIDENCE	1450.20	1472.70	1487.50	1470.13	0.46	2.42
EMPLOYMENT, AGRICULTURAL	66.20	79.60	79.90	75.23	16.10	-0.09
EMPLOYMENT, TOTAL NON-AGRICULTURAL	1384.00	1393.10	1407.60	1394.90	1.02	2.44
UNEMPLOYMENT RATE	11.40	10.50	10.10	10.72	-2.54	3.99
EMPLOYMENT, TOTAL NON-AGRICULTURAL WAGE AND SALARY	1150.20	1155.90	1174.90	1161.00	0.61	0.46
EMPLOYMENT, BITUMINOUS COAL & LIGNITE MINING (SIC 12)	45.80	45.30	45.50	45.53	-0.87	5.67
EMPLOYMENT, CONTRACT CONSTRUCTION	54.70	56.80	55.60	55.87	10.15	4.04
EMPLOYMENT, TOTAL MANUFACTURING	246.10	248.30	250.50	248.30	0.98	1.54
EMPLOYMENT, MANUFACTURING, DURABLE	132.40	134.10	136.10	134.20	1.46	2.04
EMPLOYMENT, MANUFACTURING, NON-DURABLE	113.70	114.20	114.40	114.10	0.41	0.96
EMPLOYMENT, TRANSPORTATION, COMMUNICATIONS & PUBLIC UTILITIES	62.90	60.40	63.50	62.20	0.21	5.04
EMPLOYMENT, WHOLESALE & RETAIL TRADE	261.20	263.50	261.70	262.13	0.78	0.41
EMPLOYMENT, FINANCE, INSURANCE & REAL ESTATE (SIC 60-67)	52.30	51.90	51.70	51.97	0.45	0.58
EMPLOYMENT, SERVICES (SIC 70-80)	224.10	224.50	222.80	223.47	0.33	2.95
EMPLOYMENT, CIVILIAN GOVERNMENT	197.90	199.90	219.40	205.73	7.76	1.23
EMPLOYMENT, STATE & LOCAL GOVERNMENT	155.50	159.40	176.90	165.27	9.41	1.84
HOURS AND EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING						
AVG WEEKLY HOURS, PROD WORKERS, TOTAL MANUFACTURING	39.00	38.90	39.00	39.23	0.95	2.17
AVG WEEKLY HOURS, PROD WORKERS, MANUFACTURING DURABLES	39.40	39.80	39.70	39.30	0.68	3.97
AVG WEEKLY HOURS, PROD WORKERS, NON-DURABLE MANUFACTURING	38.40	38.90	40.00	38.10	1.59	0.00
AVG HOURLY EARN, PROD WORKERS, TOTAL MANUFACTURING	8.81	8.76	8.83	8.80	1.04	4.64
AVG HOURLY EARN, PROD WORKERS, MANUFACTURING DURABLES	9.33	9.38	9.49	9.41	0.94	2.17
AVG HOURLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	8.02	8.07	7.98	8.02	1.14	5.05
AVG WEEKLY EARN, PROD WORKERS, TOTAL MANUFACTURING	343.59	340.76	344.41	345.36	0.76	6.91
AVG WEEKLY EARN, PROD WORKERS, MANUFACTURING DURABLES	367.54	369.84	376.75	369.71	0.73	6.84
AVG WEEKLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	307.97	313.90	319.20	313.70	0.73	5.82
MINING (MILLIONS OF TONS, MILLIONS OF TAX DOLLARS)						
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, EASTERN KY, TOTAL	9.30	9.05	9.50	27.83	15.12	8.94
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, WESTERN KY, TOTAL	2.46	2.24	4.33	8.80	1.41	1.39
AVG HOURLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	14.90	14.83	14.72	14.75	1.12	1.80
AVG WEEKLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	436.00	441.24	434.24	459.78	3.80	23.52
AVG WEEKLY HOURS, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	41.00	40.40	41.30	31.17	4.88	21.45
TAX RECEIPTS, COAL SEVERANCE, CONSOLIDATED, TOTAL	13.40	12.87	15.09	41.36	*	38.99
HOUSING (MILLIONS OF $, NO. OF PRIVATE RESID. UNITS--NOT SEAS ADJ)						
VALUE OF CONSTRUCTION CONTRACTS, RESIDENTIAL & NON-RES	179.10	201.40	179.30	560.50	16.37	2.54
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, 1 UNIT	5,500	5,900	5,600	17,009	1.36	49.52
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, 1 UNIT	73.43	77.00	77.00	82.92	2.74	58.99
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, TOTAL	6,000	6,400	6,000	4397.00	0.22	0.13
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, TOTAL	79.4	84.76	83.41	145.57	16.63	84.96
NET LOANS MADE & ACQUIRED BY KY. SAVINGS & LOAN ASSOCIATIONS	4.84	53.99	53.84	112.76	109.17	110.90
RETAIL SALES (MIL $, 000 CARS)						
TAX RECEIPTS, GENERAL FUND, SALES AND GROSS RECEIPTS	83.0	86.53	43	212.69	*	0.47
NEW PASSENGER CAR REGISTRATIONS, TOTAL, NOT SEAS. ADJ.	100.0	98.0	NA	NA	NA	NA
SELECTED STATE GOVERNMENT RECEIPTS (MIL $)						
TAX AND NONTAX RECEIPTS, GENERAL FUND, TOTAL	170.44	191.64	180.11	536.08	*	0.5
TAX RECEIPTS, GENERAL FUND, SALES & USE TAXES, TOTAL	87.00	100.51	91.74	183.95	*	1.11
TAX RECEIPTS, GENERAL FUND, INCOME TAX, INDIVIDUAL	57.10	58.83	53.00	185.84	*	1.00
TAX RECEIPTS, GENERAL FUND, INCOME TAX, CORPORATION	20.7	6.1	15.0	43.79	*	1.38
TAX RECEIPTS, STATE ROAD FUND, STATE SHARE	29.61	39.14	31.00	99.14	*	1.11
TAX RECEIPTS, STATE ROAD FUND, MOTOR FUELS TAXES, NORMAL	17.63	17.56	13.84	49.93	*	1.1
TAX RECEIPTS, STATE ROAD FUND, MOTOR VEHICLE USAGE TAX	10.5	11.54	7.64	29.64	*	1.1

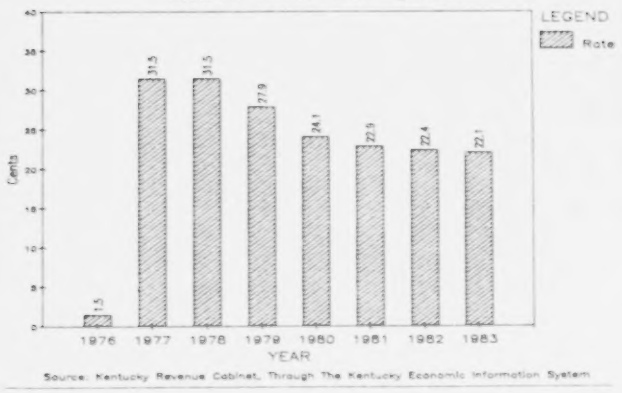
PRIVATE SOURCES FOR THE ABOVE DATA INCLUDE:
F. W. DODGE DIVISION (MCGRAW-HILL INFORMATION SYSTEMS COMPANY):
VALUE OF CONSTRUCTION CONTRACTS;
R. L. POLK & COMPANY, NEW CAR REGISTRATIONS (NA FOR 1983, SEE

NOTE: THE DATA ON PERMIT-AUTHORIZED CONSTRUCTION COME FROM THE BUREAU OF THE CENSUS, U.S. DEPARTMENT OF COMMERCE AND REPRESENT THE KENTUCKY PORTION OF THE NATIONAL SURVEY OF 16,000 PERMIT-ISSUING PLACES.

* = QUARTER TO QUARTER COMPARISONS NOT MEANINGFUL DUE TO SEASONAL VARIATION

(continued from page 5)

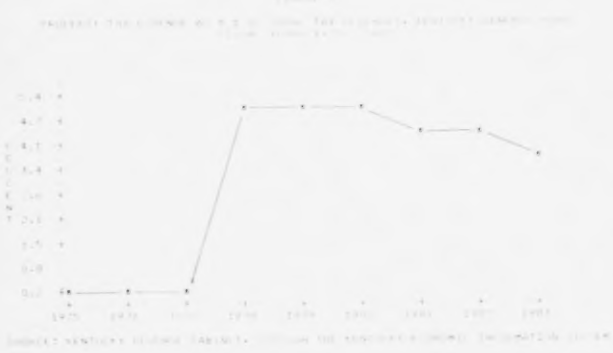
FIGURE 2
Real Property Tax
State Rate Per $100



Source: Kentucky Revenue Cabinet, Through The Kentucky Economic Information System

and local property tax yields from old real property can increase by a maximum 4 percent per year. Insofar as the costs of providing governmental services to old real property are rising at more than 4 percent per year, the expected results of House Bill 44 are a shrinkage of property tax rates and of the property tax as a percentage of total state-local tax revenue. The comparisons of state-level data presented in Figures 2 and 3 suggest that this shrinkage has occurred.

Some groups have argued that House Bill 44 is not restrictive because actual revenues from property taxation can increase by more than 4 percent because the total amount of taxable property increases over the years. While this is true as regards total revenue, the new property also requires services and these can cause state and local governments to experience total expenditure demands that exceed total revenue.



(4) When the former required local effort was changed to a state property tax, effective in fiscal year 1978, the foundation program was changed to include the "power equalization" concept. This new feature can best be explained by comparing it with state aid under the original minimum foundation program which had the required local effort provision. Under the original program, a district could not receive state aid unless its local property tax effort (essentially, tax amount as a percentage of market value of property) was at or above the state requirement. Thus, the aid program was compulsory. The voluntary part of the old program was that a district could make extra tax effort to finance extra services. This extra revenue could be from property tax rates above the required rate or from one of the three permissive taxes. But this extra local revenue was not supplemented by state aid. Mainly to encourage locally approved tax increases, the minimum foundation program was amended to include state aid related to the extra local effort. Possibly because of revenue inadequacy in state government, the power equalization program was only partially funded.

As first implemented, the power equalization program equalized among districts to an amount of revenue to be obtained from the first 5 cents of local property tax rate (the "extra" property tax). Districts with low per pupil amounts of taxable property would receive enough aid to give them a total amount (local tax revenue plus state aid) equal to the yield of the 5 cent tax rate in the district with the highest per pupil value of property (benchmark district). If, for example, the local 5 cent rate would yield $20 per pupil in a poor district but $80 in the benchmark district, the poor district would receive state aid of $60 per pupil to bring the total available amount to $80 in each district. Note that the benchmark district gets no power equalization aid. It was intended that the aid would be increased over the years so that higher levels of local tax rates would be equalized, such as the first 10 cents, first 15 cents, etc. Districts with small (or zero) levels of local rates receive little or no aid under this program, thereby creating an incentive for districts to use increased local property tax rates or to use one of the permissible non-property taxes sufficiently to receive the state aid available under the power equalization program.

There are legitimate reasons for allowing extra local expenditures financed by extra local tax effort. One reason, for example, is to allow indirectly for interdistrict differences in costs or service needs. Also, the power equalization program has the commendable objective of encouraging local school districts to make increased tax effort. But an expanded power equalization program would require increased amounts of state aid and possibly could divert revenue away from the state's minimum foundation program. The guaranteed minimum expenditure level, as a state total, must grow in dollar amount over the years because of inflation and expanded definitions of service needs (for example, reduced class size, mandatory kindergartens, longer school days and years, additional requirements for teacher certification, merit pay for superior teachers, and electronic computers for classroom use). It is possible, therefore, that greater emphasis on the power equalization program could lead to inadequacy of the minimum foundation program. Because the power equalization program reduces interdistrict expenditure inequality only if districts actually do make extra tax effort, and because the foundation program is a powerful instrument for reducing interdistrict inequality, too great expansion of the power equalization program could be regarded as a backward step in Kentucky's efforts to reduce expenditure inequality among school districts.

Some problems of individual school districts

Most of the above explanation of educational finance in Kentucky concerns expenditure levels among districts and the degree to which the results of the foundation program reduce inequality among districts. Another set of issues is seen if educational finance is viewed from the point of view of a particular district. Some of these concerns are explained.

Limits set by state laws. Districts are limited in amounts of extra tax revenue they can raise because rates are limited for the property tax and the 1966 permissive taxes and they are denied use of other tax types. A district wishing to raise its expenditure level has several routes. First, it can enact one of the permissive taxes if not already used. Second, it can raise the property tax "compensating rate" by the full 4 percent each year, if not already doing so. Third, it can raise the property tax rate above the 4 percent increase by subjecting the question to the voters. Fourth, it can ask the voters for a special increase in the property tax rate to finance a school building. For the third and fourth options, the past experience has mainly been voter rejection. Thus, school districts are being squeezed in their ability to raise extra local revenue because of the 4 percent limit on property tax rate growth (which is inadequate if costs increase more than 4 percent) and the limits on use of other taxes.

Districts with special needs. If districts have expenditure needs that are not recognized in the minimum foundation program, these districts are expected to finance their special needs from extra local tax revenue. But as described above, their ability to do so is restricted. While this restriction applies generally among school districts, it probably differs in degree of severity because of possible cost and service-need differences among districts. A district that must pay high salaries to attract suitable teachers, or one with an unusually large percentage of special needs students, or one whose population expects a better and more varied offering of educational service—such districts can have inadequate revenue relative to expenditure needs. Without changes in state laws, such districts have virtually no recourse.

Distribution of funds for vocational and special education. Some districts had recognized the need for vocational and special education programs before the state minimum foundation program recognized this need. But when the state programs were expanded, the state in some cases gave fewer of the new units to districts already having units, meaning that these districts were shorted in distribution of the new units because they were already financing units out of extra local revenue. This was especially likely to happen in the more affluent districts.

Use of funds within a district

Distribution of funds in the minimum foundation program is heavily influenced by pupil attendance. In a sense, each student in attendance generates a particular amount of state money for the district. One could question, therefore, whether one high school with 1,000 students has the same total amount of money spent on its programs as is the case for another high school with 1,000 students and in the same school district. Do uses of funds differ (that is, provide different programs) among schools in a district even if the total spent per average pupil is the same among schools? Also, are different programs offered in essentially identical schools in the same district? It is a fact that more state and local tax revenue is generated, per pupil, in the more affluent neighborhoods and also it is possible that students and parents from those areas voice interest in better and more varied school programs. To what extent should the educational system strive merely to maintain the existing differences or instead attempt to reduce differences?

Another possible cause of difference in educational quality among schools in a district is the natural tendency for new teachers to be first employed at the less desirable schools (from the teachers' point of view) and later transfer to the more desirable schools when they are better trained and experienced. Also in local areas with expanding populations, the need for new school structures most likely arises in the new or expanded areas while the older areas continue using the old structures. Moreover, the socio-economic backgrounds of students may differ among schools in the same district. Several questions can be asked. Do schools in the same district differ in the percentage of teachers with few years of experience? Do average teacher salaries differ among schools in the same district? If yes answers are found to these questions, one could question whether the quality of service is uniform among essentially identical schools in a district.

Conclusion

It obviously would be difficult to design all aspects of school programs to achieve statewide uniformity among pupils at the total service level, and there are legitimate arguments pro and con as to the desirability of providing identical services. But questions need to be asked regarding the types and degrees of differences in educational services, not only among districts but also among schools in a particular district and even among pupils in a particular school. Insofar as differences are found to exist, legitimate questions can be raised as to reasons, justifications, and prospects for correction and to link the answers to the funding programs, where appropriate.

Note

[1]For studies on Kentucky educational finance, see: Don M. Soule and Wayne K. Talley, *Toward Equal Educational Opportunity in Kentucky* (Lexington: Office of Business Development and Government Services, University of Kentucky, 1973); Jim Peyton, *Equal Educational Opportunity in Kentucky* (Frankfort: Legislative Research Commission, Research Report No. 105, October 1973); *Equitable Financing of Public Schools* (A Report to the Kentucky State Superintendent for Public Instruction, by Kern Alexander, Principal Consultant, July 1983).

(continued from page 1)

from the cyclical lows of 1982 but will not provide a major source of growth once full recovery has been achieved. It is difficult to determine if Kentucky will follow long term national employment trends but the BLS projections are an indication of the likely growth potential of the major sectors for the next decade.

Prospects appear promising for continuing although moderate growth in Kentucky both in the short term and in the long run. The key external factors affecting this growth include the level of interest rates, developments in the export sector and, more generally, the strength and duration of national economic recovery. Internally, the state's growth potential will depend upon the state's ability to retain existing and attract new industry and to provide conditions conducive to the expansion of the services sector.

TABLE 1

PROJECTED U.S. JOB GROWTH, 1982-1995
(in thousands)

Industry	1982-95 New jobs	1982-95 Percent of total
Total new jobs	25,248	100.0
Goods-producing:	6,548	25.9
Farm	-265	-1.0
Mining	122	.5
Construction	2,434	9.6
Manufacturing	4,257	16.9
Durable	3,170	12.6
Nondurable	1,087	4.3
Service-producing:	18,700	74.1
Transportation, public utilities	1,094	4.3
Trade	6,009	23.8
Finance, insurance, and real estate	1,786	7.1
Services	8,673	34.4
Private households	-289	-1.1
Government	1,427	5.7

(continued from page 2)

KCEA News & Notes

he has been on leave from the University to serve as State Budget Director.

We join in welcoming Dr. Hackbart back to the University and look forward to working with him.

* * *

In early December, 1983, Governor John Y. Brown, Jr. appointed Ronald G. Geary as a member of the Kentucky Council of Economic Advisors to replace John B. Clarke, whose term had expired. Mr. Geary will serve for a term expiring in January, 1987.

Ronald Geary is an alumnus of both the University of Kentucky and the University of Louisville, having received the B.S. in Accounting in 1969 from the University of Kentucky and his law degree from the University of Lousiville in 1974. Mr. Geary is currently a partner in the law firm of Barnett and Alagia, Lousiville; prior to this he was Secretary of the Kentucky Revenue Cabinet. He is also serving a term on the University of Kentucky Board of Trustees.

As we welcome Mr. Geary to membership on the KCEA, we also extend our appreciation to Mr. Clarke for the support he has given to the work of the KCEA during his tenure.

* * *

The offices of the staff of the KCEA (the Center for Applied Economic Research, College of Business and Economics, University of Kentucky) moved in mid-November, 1983, from the Commerce Building to the Mathews Building next door. All telephone numbers remain the same. The new mailing address for the KCEA is:

302 Mathews Building
Lexington, Kentucky 40506-0047

All readers of this column are cordially invited to visit us in our new offices during the regular University business hours.

* * *

The Center for Applied Economic Research (CAER), together with the Government Publications Department of M. I. King Library and the Office of Continuing Education of the College of Library and Information Science, University of Kentucky, is sponsoring a day and a half workshop on "Using Federal Government Statistics," January 27 and 28, 1984. Representatives of three federal statistical agencies, the Bureau of the Census, the Bureau of Labor Statistics, and the National Center for Health Statistics, will give presentations and demonstrations, as will Vernon Smith of the State Data Center (Urban Studies Center, University of Louisville) and Margaret O. Adams and Frances E. Ross of the KCEA/CAER.

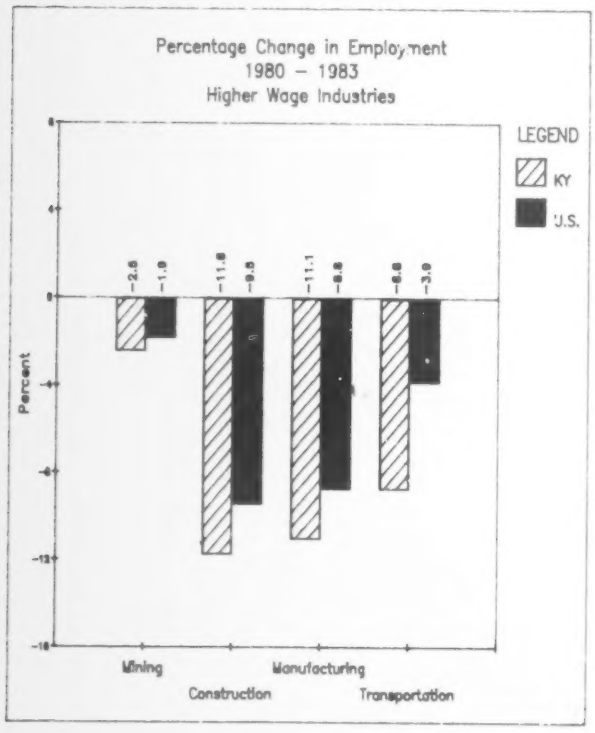
—moa—

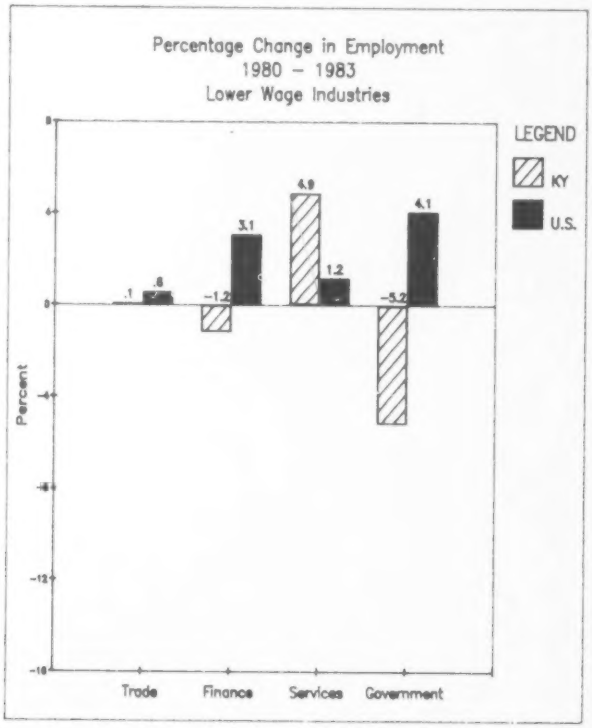
Income Implications of Interindustry Employment Changes

Major changes in employment among industries can have important effects on levels of average income because wage levels differ among industries. Using 1980 data, four Kentucky industry groups had average annual earnings above the state average (mining, 168 percent of the state average; transportation-communications-public utilities, 141 percent; construction, 119 percent; and manufacturing, 119 percent) and four industry groups were below the state average (finance-insurance-real estate, 95 percent of the state average; government, 87 percent; trade, 72 percent; and services, 71 percent). If, for example, a reduction in manufacturing employment was exactly offset by an increase in services employment, the average annual earnings for Kentucky's total nonagricultural wage and salary workers would fall.

Comparing 1980 with 1970, Kentucky wage and salary employment increased 18 percent in the four industry groups with above average wages and 44 percent in the four industry groups with less than average wages. The charts below compare 1983 with 1980 (*annual* amounts for 1983 are estimated from the first 10 months). Kentucky employment appears to have declined almost 10 percent in the four higher wage industries and only 0.3 percent in the four lower wage industries. Similar comparisons using U.S. data show that employment increased 9.7 percent in the four higher wage groups and increased 30.6 percent in the four lower wage groups, between 1970 and 1980. The U.S. changes between 1980 and 1983 were 7.9 percent decline in the four higher wage groups and 2 percent increase in the four lower wage groups. It appears, therefore, that employment shifts toward lower wage industries have been occurring in both Kentucky and the U.S. Employment shifts toward lower wage industries help explain the slow rates of income growth in recent years.

The income-reducing efffects of employment shifts to lower wage industries could be offset by increases in the percentage of population employed. For example, a husband might be forced to shift employment to a lower wage job, tending to reduce the family's income. But if other family members become employed, even at low wage jobs, the family's total income would tend to increase. In the period 1970-80, labor force participation rates (percentage of population age 16 and older in the labor force) increased from 54.9 to 61.2 percent in Kentucky and from 60.4 to 63.8 percent in the U.S. The income increasing effects of higher participation rates probably were too small to offset the income reducing effects of the employment shifts toward lower wage industries.





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KENTUCKY ECONOMY
Review & Perspective

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SPRING 1984
Vol. 8, No. 1

Kentucky Economic Review

by Charles W. Hultman*

Although the economic recovery and growth that characterized the nation during 1983 was relatively pervasive, recovery in the Kentucky economy was less extensive and was not reflected in all of the standard indicators. At the national level, the labor force unemployment rate decreased slightly from 9.7 percent in 1982 to 9.6 percent in 1983; in Kentucky, the unemployment rate actually increased from 10.6 percent in 1982 to 11.7 percent in 1983. However, revisions made recently by the Kentucky Cabinet for Human Resources show that during 1983 Kentucky's unemployment rate (both seasonally adjusted and unadjusted) declined during the second half of the year.

Other indicators suggest improvement occurred in the Kentucky economy during 1983. Total receipts (tax and non-tax) for the state government's General Fund increased about 6.7 percent from the fourth quarter of 1982 to the fourth quarter of 1983, compared to only a 1 percent increase in the similar 1981 to 1982 period. Nonetheless, at the end of the first half of the fiscal year, growth in the General Fund, at an overall rate of 4.5 percent, was below the Revenue Department's forecasted growth rate of 5.7 percent for the General Fund for the year. Employment, average weekly hours, and average weekly earnings in manufacturing, especially among production workers in durable manufacturing industries, increased over the same time period. The value of construction contracts (total residential and non-residential) also rose sharply during the year.

The slow recovery in Kentucky in 1983 stemmed in part from the weakness in the coal market, which in turn caused a fairly sharp decline in mining employment, income, and coal severance tax payments. In addition, the Kentucky agricultural sector was adversely affected by the summer drought and by the appreciated value of the dollar in foreign exchange markets and consequent reduced agricultural sales in world markets. Production of tobacco, Kentucky's major crop and its major agricultural export commodity, was down 87 percent over 1982; soybeans were down 52 percent—and corn production fell 71 percent. Some of this decline was deliberate and related to the federal government's acreage reduction programs, but the remainder can be attributed to the drought. The full economic impact is yet to be determined.

Some signs, although not all, point to continued expansion at the national level. The U.S. Composite Index of 12 Leading Indicators continued to rise through February—the latest month for which data are available—and February's seasonally adjusted unemployment rate declined slightly. The Commerce Department's initial estimate of the growth in real Gross National Product (GNP) for the first quarter of 1984 also reflected significant strength in the economy. The estimate indicated an annual rate of 7.2 percent, which follows a 5 percent increase for the fourth quarter of 1983. In addition, the Consumer Price Index rose at an annual rate of 4.6 percent in February—well within an acceptable range as compared with the double-digit figures of 1981 and 1982.

The two major concerns are the $185 billion deficit proposed by the Reagan administration for fiscal year 1984-85 and the upward shift in the prime rate—from 11 percent in February to 12 percent in April. Given these developments in an election year, it can be expected that economic recovery will be slowed but not stopped during the months ahead.

One partially favorable development for the nation's economy since the early part of 1984 has been the declining international value of the U.S. dollar. This change reduces the price of U.S. exports in terms of foreign currencies and thus contributes to a greater volume of exports. Although the depreciation of the dollar has a beneficial impact on U.S. employment, it also raises the price of U.S. imports and adds to inflationary pressures within the domestic economy.

In its April 1984 economic forecast, Data Resources, Inc. (DRI), projects real GNP to increase about 5.7 percent in

(Continued on page 10)

**Charles W. Hultman is Professor of Economics, University of Kentucky and past Chairman of the Kentucky Council of Economic Advisors.*

News & Notes

The Secretary of the Commerce Cabinet serves *ex-officio* as a member of the Kentucky Council of Economic Advisors (KCEA). We therefore would like to welcome Carroll F. Knicely to the KCEA; he replaces W. Bruce Lunsford.

A long-time resident of Kentucky, Secretary Knicely has been involved in Kentucky journalism, economic development, banking, and civic affairs. He was editor and publisher of the *Glasgow Daily Times* for 19 years, and retains ownership in a publishing company. He also served as Commissioner of the Kentucky Department of Commerce in 1979. Currently Mr. Knicely is also a director of Citizens Bank & Trust Co. of Glasgow, and is active in several service organizations.

Professor Richard A. Dolin, Department of Business Administration, Bellarmine College, Louisville, was named recently to the KCEA by Governor Martha Layne Collins. He replaces H. Clyde Reeves of Frankfort, whose term had expired. Professor Dolin has been teaching at Bellarmine since 1980; prior to that he had been in private law practice in Louisville since 1973. He received his bachelor's degree from Ohio State University, an MBA from Bellarmine, and his law degree from the University of Louisville. Professor Dolin's primary academic interest is in general and financial management of small and medium-sized businesses. He works as a consultant for a number of profit and nonprofit organizations and sits on the boards of a variety of organizations.

In noting Clyde Reeves' "retirement" from the KCEA, we also wish to express our gratitude for the support he extended to the work of the KCEA staff. He served on the KCEA since 1978, following a life-time service to Kentucky and to higher education. His perspectives on economic analysis were always appreciated, as was his understanding of the value of centralizing and systematically maintaining and disseminating statistics on the Kentucky economy.

• • •

The College of Business and Economics, University of Kentucky, announces a general reorganization of its research activities with the creation of the Center for Business and Economic Research. This new center incorporates the staff and responsibilities of the former Center for Applied Economic Research and the Office for Research and will coordinate all extramurally funded research for the College. With a broad mission to develop the College's full potential for funded research, the Center staff will work closely with College faculty and staff in accounting, economics, finance, management, and marketing.

The expanded responsibilities of the new Center reflect recent changes in the College's academic and administrative structure. The change is intended to allow the College more effective utilization of the resources available for meeting its research mission. The resource base for operation of this Center will include, among other resources, the state appropriation to the College for the research required under KRS Chapter 147B—Council of Economic Advisors. For the 1984-86 biennium, this appropriation will permit the Center to continue maintenance of the Kentucky Economic Information System (KEIS) and to prepare an annual report for transmittal to the Kentucky Council of Economic Advisors.

(Continued on page 11)

University of Kentucky
College of Business & Economics
Richard W. Furst, Dean
Merl M. Hackbart, Associate Dean for Graduate Studies and Research

Center for Business & Economic Research
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Kentucky Economy: Review & Perspective
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KENTUCKY ECONOMY: Review & Perspective

ISSN 0270-1421
OCLC: 5289744

Published quarterly by the
Center for Business & Economic Research
College of Business and Economics
302 Mathews Building, University of Kentucky
Lexington, Kentucky 40506-0047 (606) 257-7675

This publication provides current information concerning the Kentucky economy. It is a forum for the publication of short expository articles, analyses of some aspect of the Kentucky economy, forecasts of the Kentucky economy, and tables of selected data chosen as indicators of developments in the Kentucky and national economies. The publication also sometimes includes information about enhancements to the Kentucky Economic Information System (KEIS) and articles dealing with information systems in general.

Articles submitted for publication should be sent to the Editor at the address given above. All submissions will be reviewed independently by persons recognized as knowledgeable in the specific subject discussed. However, the ultimate responsibility for content rests with the author.

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Printed with state funds at the Printing Services Department, University of Kentucky.

Kentucky's Public Infrastructure Needs: A Preliminary Assessment

by Phillip W. Roeder and Dennis B. Murphy*

Considerable attention has focused, over the past year, on the condition of our nation's public infrastructure. The existing infrastructure has been found to be inadequate to meet the needs of a growing society. These inadequacies result from the combined effects of deteriorating facilities, due to age and/or lack of maintenance, and pressures exerted by the demands of changing technologies. Generally, this condition has been worsened by the revenue implications of the longest and deepest economic recession since the 1930s and high rates of interest which have made it increasingly difficult for state governments to maintain an acceptable public infrastructure system. Furthermore, the Federal government's commitment to finance infrastructure maintenance, repair, and expansion appears to be declining. As a result, the states have been placed in the difficult position of attempting to maintain an adequate infrastructure to meet society's needs without having the necessary resource base to do so. Consequently, all levels of government must analyze their present and future infrastructure actions carefully so that effective decisions can be made for the present and future financing of public infrastructure needs.

A clear, concise definition of what is meant by the term "public infrastructure" is needed in order to be able to deal with revelant public/private sector and intergovernmental issues. In practice, the terms "infrastructure," "public works," and "public capital investment" have been used interchangeably. However, the terms often refer to different public sector investment efforts. Public works refers to works constructed by the government for the public's use or service. Public capital investment is a somewhat more inclusive term than public works and typically refers to the tangible, long-term investment made by government for physical structures. However, the most inclusive term and the one used in this article is infrastructure, defined as the basic installations and facilities on which the life and economic growth of a community or state depend.

To further define the term as it pertains to intergovernmental relationships and responsibilities, infrastructure can be broken down into three categories:

Basic and Traditional Infrastructure: highways, public transit, airports, municipal water supply, wastewater treatment, and other investments in basic public service facilities.

Human Services Infrastructure: state and local government programs to meet human service needs, and for educational, humanities, or correctional programs and facilities.

Development Infrastructure: this newest category to emerge over the past several years involves direct state and/or local government investment in specific economic development and revitalization projects such as civic centers, parking garages, hotels, and other joint public/private ventures. Such infrastructure projects have emerged as a major public sector activity and have as their ultimate goal, the enhancing of the general economic welfare by making substantial public commitments to economic development, financed by state and local bonded indebtedness.

The importance of infrastructure in Kentucky is considerable. The Commonwealth's agricultural and coal mining economy requires a modern and efficient transportation system. In addition, the projected growth of Kentucky's population in the predominately rural areas of the state will require a sizable investment in drinking water and wastewater treatment facilities to meet acceptable quality standards. Precise relationships between infrastructure condition, economic development, and industrial locational decisions have not been fully established. However, since the initial size and distribution of infrastructure investment is influenced significantly by the existing distribution of population and economic activity, there appears to be a strong relationship between them and new private investment and locational decisions. This theory is supported by a Bureau of the Census survey conducted in the mid-1970s for the Economic Development Administration that examined over 2,000 firms, representing 254 product classes.[1] A majority of the respondents stated that the availability of adequate basic infrastructure facilities was either of critical or significant importance when making locational decisions and more influential than were local tax or industrial revenue bond financing incentives.

The need for continuing investment in basic infrastructure is substantial both for Kentucky and the nation. Traditionally, basic infrastructure has been funded by all three levels of government—federal, state, and local. The Congressional Budget Office recently estimated the annual capital needs for all states' traditional infrastructure programs for the years 1983-1990.[2] Under current federal

*Phillip W. Roeder is Associate Professor of Political Science and Public Administration, University of Kentucky; Dennis B. Murphy is Program Auditor, Office of the Auditor General, State of Arizona.

policy, they amount to over $53 billion in 1982 dollars. This includes $27.2 billion annually for highways, $6.6 billion annually for wastewater treatment facilities, and $7.7 billion annually for drinking water supply.

The second category of infrastructure is also very important to Kentucky. The Commonwealth is presently under a federal court order to reduce the population in its existing correctional facilities. Millions of dollars will be needed over the next few years to finance the capital investment needs of the state corrections system. The state's mental hospitals are old and in need of replacement; to try and meet this need the 1982 Kentucky General Assembly authorized the sale of $20 million in bonds to construct one new mental health facility and renovate another. Construction of public schools is primarily a local district responsibility in Kentucky; the current need for classroom facilities is estimated to be $340 million.[3]

Economic Development financing has become a major thrust of Kentucky's infrastructure investment effort in recent years. In 1982, the legislature authorized the issuance of $100 million in bonds designed to assist the private sector in developing a strong, diversified economic development program. This program emphasizes the construction of industrial parks and the development of riverport, downtown and recreational facilities. Obviously, Kentucky is not the only state funding major economic development infrastructure activities. Many states and localities are emerging as the primary financiers of not only economic development, but also human resources infrastructure projects. While these are state programs and theoretically should be state funded, the needs and responsibilities often far exceed the capacity of these governments to finance the projects.

Unlike the federal government, virtually all states are required to end their fiscal year without deficits, a requirement that is becoming increasingly difficult for most states to accomplish. Although the consensus among economic forecasters is that the national economy is growing, most states have yet to experience a strong economic recovery. Fiscal year 1983 (FY 1983) saw more states implementing budget reduction strategies than fiscal year 1982 (FY 1982).[4] Twenty-seven states took across-the-board cuts in FY 1983, up from seventeen in FY 1982; twelve additional states implemented selective program cuts; twenty-seven states enacted permanent tax increases; and twenty-four states adopted temporary revenue enhancement measures. These steps, whether permanent or temporary, were not undertaken to finance new or expanded programs but were necessary to maintain the existing revenue base. Since 1980, Kentucky has experienced revenue shortfalls of $1 billion, in addition to $900 million in federal funds lost over the same time period.[5]

The aggregate surplus of revenues for state governments has been reported as $4.7 billion in fiscal year 1981 (FY 1981), $2.3 billion in FY 1982, and $0.5 billion in FY 1983. The 1983 surplus represents 0.2 percent of current expenditures. In FY 1981, state taxes made up 48 percent of state income while non-tax revenue, including federal grants, totalled 25.3 percent. By 1985, states' non-tax revenues are projected to decline to 16.4 percent.[6] In addition to the reduction in federal grants to the states, provisions of the Economic Recovery Tax Act (ERTA) of 1981 will affect state revenues negatively. The National Governors' Association estimates that the accelerated cost recovery provisions contained in ERTA will result in $2 billion in revenue lost to the states from corporate taxes.[7] Kentucky estimates ERTA will cost state government $65 million per year.[8]

Considering the present fiscal condition of the states, projections of limited real growth in state revenues over the next several years, and the reduction of federal grants to states, states must look elsewhere for financial support for their basic public infrastructure system needs. This is especially critical because states are also almost totally responsible for funding the other major categories of infrastructure, i.e., human services infrastructure, and economic development infrastructure.

The federal government is reducing financial assistance to the states for federally-mandated programs in the health and welfare area, at the same time as it is reducing its support for the basic public infrastructure system. After significant increases in the 1970s, the proportion of total spending on infrastructure activities by the federal government declined between 1980 and 1982. Thus, the share of the burden borne by state and local governments has increased relatively. More importantly, the decline in federal support, as estimated by the Congressional Budget Office (CBO), will continue. The CBO reports FY 1983 annual capital spending for the basic, traditional infrastructure system was about $53.4 billion. The federal share of this total was approximately $28.2 billion, or 52.8 percent; this represents a decline from a 54.6 percent share in FY 1982.

It is obvious that finding the financial resources to support infrastructure investment and maintenance is a problem of national scope. Government expenditures on infrastructure as a proportion of overall budget has declined at all levels of government from 2.2 percent of Gross National Product (GNP) in 1960 to 1.3 percent of GNP in 1980.[9] State and local capital investment as a percentage of total budget outlays declined from approximately 25 percent in 1960 to 14 percent in 1980.[10] Faced with revenue constraints and increased demands for services, many state and local governments have chosen to balance their budgets by deferring or eliminating capital investment and maintenance. When combined with similar reductions by the federal government, it is apparent that the necessary financial commitment to the nation's infrastructure system may no longer be present.

In order to address the complex problems of our nation's infrastructure, to gather reliable data on the extent of infrastructure needs, and to propose policies and programs that confront these issues, the Joint Economic Committee of the Congress requested a national study; Kentucky was one of 23 states to participate.[11] The Kentucky study was designed to estimate the future infrastructure investment needs of the Commonwealth and to assist the Joint Economic Committee of Congress in their task of identifying the future infrastructure needs of the nation.

Collection of data for the Kentucky study was limited to *basic infrastructure needs*: highways and bridges, local streets and roads, mass transit, airports, railroads, water supply, wastewater treatment, and water resources. Human service and development infrastructure were not included. Past and future spending levels for these facilities were sought from federal, state, and local levels of government. Varying degrees of success were experienced in obtaining the data, depending upon the internal data collection and planning efforts by the relevant agencies. In reviewing the study results, it should be noted that progress only recently has been made to develop planning and budget documents to detail future infrastructure needs. In the past, the missions of most state and federal agencies did not call for extensive recordkeeping or planning. Therefore, the results of the analysis of some basic infrastructure categories are incomplete; others have a planning horizon that is shorter than desired for capital planning purposes.

A summary of the study findings is presented in Table 1. Briefly, the investment need for highways and bridges through fiscal year 1989 (FY 1989) is estimated to be $7,945 million (in 1982 dollars). This figure is derived from a maintenance cost figure estimated by the University of Kentucky's Transportation Research Program.[12] A linear extrapolation to fiscal year 2000 (FY 2000) shows investment needs for highways and bridges to be $20,430 million (in 1982 dollars). By employing a population growth factor based upon population projections from the Urban Studies Center, University of Louisville, water supply treatment and distribution needs are estimated to be $672 million (in 1982 dollars) through FY 1989, with a total need of $1,428 million (in 1982 dollars) through FY 2000. Wastewater treatment needs, as determined by the U.S. Environmental Protection Agency, are $858.5 million (in 1982 dollars) through FY 1989, and $3,080 million (in 1982 dollars) for FY 2000. These estimates include backlog needs. Water resources infrastructure needs are estimated for FY 1989 at $11 million for state-owned dam repair, $49 million for local flood control, and $66 million for riverport development, all in 1982 dollars. Estimates to the year 2000 were impossible to make due to data constraints.

In total, an estimated $9,716 million (in 1982 dollars) in FY 1989 needs were identified, while an estimated $25,231 million (in 1982 dollars) were identified through FY 2000. In addition, since the investment needs for human service and development infrastructure are not included in this study, an underestimate of the total investment need for all infrastructure categories in Kentucky occurs. The addition of these two categories would increase the investment need substantially; however, until further capital planning is done in Kentucky, the total impact of these two infrastructure categories is unknown.

TABLE 1

KENTUCKY'S BASIC INFRASTRUCTURE NEEDS
(MILLIONS OF 1982 DOLLARS)

		FY 1989 Needs	FY 2000 Needs
I.	Transportation		
	A. Highways and Bridges	7,945	20,430
	B. Local Streets and Roads	NA	NA
	C. Mass Transit	52	134
	D. Airports	55	141
	E. Railroads	7	118
II.	Water Supply, Treatment and Distribution	672	1,428
III.	Wastewater Treatment	859	3,080
IV.	Water Resources		
	A. Dams	11	NA
	B. Flood Control	49	NA
	C. Riverports	66	NA

In total, an estimated $9,716 million (in 1982 dollars) in needs were identified for FY 1989, while an estimated $25,231 million (in 1982 dollars) were identified for FY 2000.

Source: Phillip W. Roeder and Dennis B. Murphy, *Kentucky's Public Infrastructure Needs: Capital Investment Planning and Budgeting*, Bureau of Policy Research, Martin Center for Public Administration, University of Kentucky, October 1983.

TABLE 2

NEEDS, RESOURCES AND PROJECTED SHORTFALLS: U.S. INFRASTRUCTURE 1983-2000 (BILLIONS OF 1982 DOLLARS)

	Needs	Resources	Shortfalls
Highways and Bridges	$720	$455	$265
Other Transportation	178	90	88
Water Supply and Distribution	96	55	41
Wastewater Collection and Treatment	163	114	49
Totals	$1,157	$714	$443

Source: *Hard Choices*, a summary report of the National Infrastructure Study, prepared for the Joint Economic Committee of the United States Congress, February 1984.

The considerable need for investment in Kentucky's infrastructure can also be placed in the context of national needs. The conclusions of the summary report of the National Infrastructure Study are that the problem is national in scope, the problem is manageable, and the problem requires that state and local governments continue to assume primary responsibilities in the area, but that there also must be a long-term response and commitment by the federal government.[13] The estimated national infrastructure needs and resources are shown in Table 2. As can be seen, resources of $714 billion (in 1982 dollars) are projected to fall $443 billion (in 1982 dollars) short of need for the period 1983-2000. Kentucky's portion of that shortfall is estimated to be $13 billion, while Indiana's portion is estimated to be $28 billion.

(Continued on page 11)

selected indicators OF ECONOMIC A

These tables of selected indicators of economic activity were prepared by a special-purpose program of the Kentucky Economic Information System. The data in the tables are reported figures which were obtained from a variety of state and federal agencies, as well as from private firms.

UNITED STATES DATA

	Oct. 1983	Nov. 1983	Dec. 1983	Qtr. IV 1983	% Chg. 83-III 83-IV	% Chg. 82-IV 83-IV
CONSUMER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)						
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, ALL ITEMS (NEW DEF)	302.60	303.10	303.50	303.07	0.87	NA
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, FOOD AND BEVERAGES	285.70	285.30	286.50	285.83	0.30	2.35
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, HOUSING (INCL RENTAL EQUIV)	326.80	327.00	327.40	327.07	0.56	NA
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, APPAREL AND UPKEEP	200.70	200.70	199.30	200.23	1.35	2.77
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, TRANSPORTATION	305.00	306.30	306.30	305.87	1.22	3.55
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, MEDICAL	362.90	364.90	366.20	364.67	1.40	6.71
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, ENTERTAINMENT	249.10	249.50	249.50	249.37	1.08	3.86
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, OTHER	296.80	298.10	298.60	297.83	2.59	8.75
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, SPECIAL INDEX: ENERGY	425.10	419.90	418.00	421.00	-2.03	-0.36
PRODUCER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)						
PRODUCER PRICE INDEX, ALL COMMODITIES	306.00	305.60	306.00	305.87	0.48	1.87
PRODUCER PRICE INDEX, ALL FINISHED GOODS	287.60	286.80	287.10	287.17	0.54	0.82
PRODUCER PRICE INDEX, FINISHED CONSUMER GOODS	287.00	285.80	287.10	286.63	0.46	0.55
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS	315.60	315.70	315.80	315.70	0.51	1.85
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS FOR MANUFACTURING	296.40	296.10	297.00	296.50	0.45	2.67
PRODUCER PRICE INDEX, CRUDE MATERIALS	324.80	324.10	327.80	325.57	0.05	4.14
PRODUCER PRICE INDEX, CRUDE FOODSTUFFS AND FEEDSTUFFS	253.70	252.00	256.20	253.97	-0.01	7.36
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, SPOT(1967=100)	437.00	444.20	446.10	442.43	-0.01	1.96
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, CONTRACT(JUNE76=100)	151.20	151.40	152.30	151.63	0.95	0.07
PRODUCER PRICE INDEX, ALL CONSTRUCTION MATERIALS	311.60	300.60	301.40	304.53	0.36	5.78
CONSUMER PRICES: ENERGY (U.S. CITY AVERAGE)						
AVG PRICE FOR UTILITY (PIPED) GAS, PER 40 THERMS	27.03	27.19	27.33	27.19	-0.37	7.70
AVG PRICE FOR UTILITY (PIPED) GAS, PER 100 THERMS	64.06	62.39	62.54	63.00	-2.47	7.07
AVG PRICE FOR ELECTRICITY, PER 500 KWH	38.78	38.32	38.19	38.43	-2.85	3.76
AVG PRICE FOR FUEL OIL #2 (HOME HEATING OIL), PER GALLON	1.09	1.09	1.08	1.09	0.22	-11.41
AVG PRICE, GASOLINE, ALL TYPES, PER GALLON	1.24	1.22	1.21	1.23	-3.16	-3.01
AVG PRICE, GASOLINE, LEADED REGULAR, PER GALLON	1.17	1.16	1.15	1.16	-3.47	-3.69
AVG PRICE, GASOLINE, UNLEADED REGULAR, PER GALLON	1.25	1.24	1.23	1.24	-3.12	-2.89
AVG PRICE, GASOLINE, LEADED PREMIUM, PER GALLON	1.37	1.36	1.38	1.37	-4.17	-2.07
LABOR FORCE (SEASONALLY ADJUSTED, MILLIONS OF PERSONS)						
LABOR FORCE, TOTAL (INCL RES ARMED FORCES)	113.51	113.72	113.82	113.68	-0.14	0.47
LABOR FORCE, CIVILIAN (EXCL RES ARMED FORCES)	111.87	112.03	112.14	112.01	-0.04	1.07
EMPLOYMENT, RESIDENT ARMED FORCES	1.69	1.68	1.69	1.69	0.54	1.50
EMPLOYMENT, TOTAL CIVILIAN	101.97	102.61	102.94	102.51	0.96	3.49
EMPLOYMENT, AGRICULTURE	3.24	3.26	3.36	3.28	-3.93	-4.99
EMPLOYMENT, NONAGRICULTURAL	98.73	99.35	99.58	99.22	1.13	3.67
UNEMPLOYED, CIVILIAN, TOTAL	9.90	9.43	9.19	9.51	-9.71	-19.26
UNEMPLOYMENT RATE, TOTAL LABOR FORCE	8.70	8.30	8.10	8.36	-9.58	-19.64
UNEMPLOYMENT RATE, CIVILIAN LABOR FORCE	8.80	8.40	8.20	8.49	-9.67	-20.12
OTHER SELECTED NATIONAL INDICATORS:						
U.S. GROSS NATIONAL PRODUCT (B $) (% CHG, ANNUAL RATE)	NA	NA	NA	3436.20	9.10	10.50
U.S. REAL GROSS NATIONAL PRODUCT (B 72$) (% CHG, ANNUAL RATE)	NA	NA	NA	1572.50	5.01	6.20
PERSONAL INCOME, TOTAL, SEASONALLY ADJUSTED (B $)(% CHG, ANNUAL RATE)	2812.50	2833.50	2859.60	2835.20	11.05	7.72
COMPOSITE INDEX OF 12 LEADING INDICATORS (1967=100)	162.20	161.90	162.90	162.80	2.22	16.59
INDEX OF INDUSTRIAL PRODUCTION, SEASONALLY ADJUSTED (1967=100)	155.00	155.50	156.40	155.63	2.55	15.06
AVERAGE PRIME RATE CHARGED BY BANKS ON SHORT-TERM BUSINESS LOANS	11.00	11.00	11.00	11.00	1.88	-8.00
INTEREST RATE, YIELD ON 3-MONTH TREASURY BILLS	8.64	8.76	9.00	8.80	-4.21	10.92
PRIVATE HOUSING UNITS AUTH, 16000 PERMIT-ISSUING PLACES (SADJ THOU)	1630.00	1642.00	1549.00	1607.00	9.37	30.05
TOTAL INSTALLMENT CREDIT OUTSTANDING AT END OF MONTH (B $)	371.56	376.39	387.93	387.93	5.53	12.71

ACTIVITY

KENTUCKY DATA

	Oct. 1983	Nov. 1983	Dec. 1983	Qtr. IV 1983	% Chg. 83-III 83-IV	% Chg. 82-IV 83-IV
LABOR FORCE (NOT SEASONALLY ADJUSTED, THOUSANDS)						
LABOR FORCE, TOTAL CIVILIAN	1708.35	1694.19	1683.08	1695.21	-0.08	-1.49
EMPLOYMENT, TOTAL, BY PLACE OF RESIDENCE	1544.96	1535.64	1530.07	1536.89	1.57	0.97
EMPLOYMENT, AGRICULTURAL	86.10	70.60	55.00	70.57	-9.45	-2.26
EMPLOYMENT, TOTAL NON-AGRICULTURAL	1458.86	1465.04	1475.07	1466.32	2.17	1.13
UNEMPLOYMENT RATE	9.60	9.40	9.10	9.34	-13.65	-19.09
EMPLOYMENT, TOTAL NON-AGRICULTURAL WAGE AND SALARY	1172.90	1177.30	1186.40	1178.87	2.72	1.26
EMPLOYMENT, BITUMINOUS COAL & LIGNITE MINING (SIC 12)	35.10	35.60	35.70	35.47	-0.09	-17.33
EMPLOYMENT, CONTRACT CONSTRUCTION	51.30	50.50	50.00	50.60	0.33	-4.95
EMPLOYMENT, TOTAL MANUFACTURING	244.30	243.40	247.50	245.07	1.02	4.45
EMPLOYMENT, MANUFACTURING, DURABLE	131.30	132.10	133.50	132.30	1.74	10.19
EMPLOYMENT, MANUFACTURING, NON-DURABLE	113.00	111.30	114.00	112.77	0.18	-1.57
EMPLOYMENT, TRANSPORTATION, COMMUNICATIONS & PUBLIC UTILITIES	64.30	64.60	64.70	64.53	2.92	0.05
EMPLOYMENT, WHOLESALE & RETAIL TRADE	269.20	275.80	283.00	276.00	3.60	3.31
EMPLOYMENT, FINANCE, INSURANCE & REAL ESTATE (SIC 60-67)	53.00	53.00	53.30	53.10	-0.69	1.98
EMPLOYMENT, SERVICES (SIC 70-80)	226.30	224.30	222.00	224.20	-0.97	2.48
EMPLOYMENT, CIVILIAN GOVERNMENT	223.70	224.30	224.80	224.27	9.76	-0.28
EMPLOYMENT, STATE & LOCAL GOVERNMENT	182.90	183.30	183.90	183.37	12.22	-1.08
HOURS AND EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING						
AVG WEEKLY HOURS, PROD WORKERS, TOTAL MANUFACTURING	39.70	39.60	39.90	39.73	1.27	1.27
AVG WEEKLY HOURS, PROD WORKERS, MANUFACTURING DURABLES	39.90	40.60	40.70	40.40	2.71	5.21
AVG WEEKLY HOURS, PROD WORKERS, NON-DURABLE MANUFACTURING	39.50	38.30	39.00	38.93	-0.43	-2.99
AVG HOURLY EARN, PROD WORKERS, TOTAL MANUFACTURING	8.91	9.16	9.18	9.08	3.26	7.54
AVG HOURLY EARN, PROD WORKERS, MANUFACTURING DURABLES	9.53	9.71	9.77	9.67	2.87	4.28
AVG HOURLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	8.11	8.41	8.40	8.31	3.45	9.78
AVG WEEKLY EARN, PROD WORKERS, TOTAL MANUFACTURING	353.73	362.74	366.28	360.92	4.57	8.91
AVG WEEKLY EARN, PROD WORKERS, MANUFACTURING DURABLES	380.25	394.23	397.64	390.71	5.66	9.71
AVG WEEKLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	320.35	322.10	327.60	323.35	2.99	6.49
MINING (MILLIONS OF TONS, MILLIONS OF TAX DOLLARS)						
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, EASTERN KY, TOTAL	9.03	8.76	8.04	25.83	-0.81	10.47
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, WESTERN KY, TOTAL	3.13	3.03	3.77	9.93	12.89	2.30
AVG HOURLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	14.18	14.57	13.64	14.13	-4.20	-6.51
AVG WEEKLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	453.76	501.21	486.95	480.64	4.54	-8.77
AVG WEEKLY HOURS, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	32.00	34.40	35.70	34.03	9.20	-2.39
TAX RECEIPTS, COAL SEVERANCE, CONSOLIDATED, TOTAL	15.51	16.38	16.87	48.76	*	-5.81
HOUSING (MILLIONS OF $, NO. OF PRIVATE RESID. UNITS--NOT SEAS ADJ)						
VALUE OF CONSTRUCTION CONTRACTS, RESIDENTIAL & NON-RES	185.10	144.90	177.10	507.10	-9.53	41.73
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, 1 UNIT	475.00	461.00	241.00	1177.00	-31.13	8.58
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, 1 UNIT	22.04	21.81	12.53	56.38	-32.01	23.23
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, TOTAL	858.00	740.00	449.00	2047.00	-52.69	-4.26
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, TOTAL	29.80	28.19	17.00	75.00	-48.48	14.82
NET LOANS MADE & ACQUIRED BY KY. SAVINGS & LOAN ASSOCIATIONS	24.87	80.54	47.49	152.90	35.60	312.03
RETAIL SALES (MIL $, 000 CARS)						
TAX RECEIPTS, GENERAL FUND, SALES AND GROSS RECEIPTS	72.28	68.90	73.01	214.19	*	7.85
NEW PASSENGER CAR REGISTRATIONS, TOTAL, NOT SEAS. ADJ.	NA	9.18	7.89	NA	*	NA
SELECTED STATE GOVERNMENT RECEIPTS (MIL $)						
TAX AND NONTAX RECEIPTS, GENERAL FUND, TOTAL	194.56	210.90	217.23	622.69	*	6.74
TAX RECEIPTS, GENERAL FUND, SALES & USE TAXES, TOTAL	63.36	62.68	67.14	193.18	*	11.43
TAX RECEIPTS, GENERAL FUND, INCOME TAX, INDIVIDUAL	70.56	56.95	52.31	179.82	*	9.45
TAX RECEIPTS, GENERAL FUND, INCOME TAX, CORPORATION	8.98	5.50	31.91	46.38	*	20.49
TAX RECEIPTS, STATE ROAD FUND, STATE SHARE	31.68	33.82	27.55	93.04	*	3.92
TAX RECEIPTS, STATE ROAD FUND, MOTOR FUELS TAXES, NORMAL	16.34	14.89	16.29	47.52	*	-1.02
TAX RECEIPTS, STATE ROAD FUND, MOTOR VEHICLE USAGE TAX	10.58	10.43	8.32	29.35	*	24.26

PRIVATE SOURCES FOR THE ABOVE DATA INCLUDE:
F. W. DODGE DIVISION (MCGRAW-HILL INFORMATION SYSTEMS COMPANY), VALUE OF CONSTRUCTION CONTRACTS)
R. L. POLK & COMPANY, NEW CAR REGISTRATIONS (NA FOR OCT. '83)

NOTE: THE DATA ON PERMIT-AUTHORIZED CONSTRUCTION COME FROM THE BUREAU OF THE CENSUS, U.S. DEPARTMENT OF COMMERCE AND REPRESENT THE KENTUCKY PORTION OF THE NATIONAL SURVEY OF 16,000 PERMIT-ISSUING PLACES.

* = QUARTER TO QUARTER COMPARISONS NOT MEANINGFUL DUE TO SEASONAL VARIATION

An Update on Kentucky Employment

In the December 1982 issue of this publication, Professor Don M. Soule analyzed total Kentucky nonagricultural wage and salary employment, Kentucky employment by major industry groups, and employment within the durable and nondurable manufacturing groups. The primary finding of that analysis was that total Kentucky nonagricultural wage and salary employment, as well as employment in most of the major industry groupings, peaked in 1979 (for the period 1970-81), and appeared to be declining further in 1982. Employment in finance (including insurance and real estate) and civilian government seemed then to have peaked in 1980, while annual employment in services appeared to be steadily growing.

Similar trends were again shown in the December 1983 issue with analysis of employment in higher and lower wage industries, Kentucky and the U.S., 1980-83. In Kentucky, only employment in services and trades had grown since 1980, but in the case of trades employment, the increase was only 0.1 percent. Employment growth in services at a rate of 4.9 percent 1980-83, was notable not only when contrasted with developments in all the other industries, but also because the growth rate was faster than that experienced nationally.

Employment data for 1982 and 1983 have recently been revised. With this in mind, data tables with employment by industry have again been prepared, and are shown here. All data have been indexed to the employment level in each industry in 1970. For ease of presentation, Tables 1 and 2 separate the goods-producing and the service-producing industries. Tables 3 and 4 show manufacturing employment disaggregated by durable and nondurable manufacturing industries. By presenting these tables, the previous analyses are extended to the most recent data and the reader can evaluate employment developments in Kentucky's industries through the most recent year. This brief update also complements the analysis of the Kentucky economy,

TABLE 1
KENTUCKY NONAGRICULTURAL EMPLOYMENT
GOODS-PRODUCING INDUSTRIES
INDEX NUMBERS: 1970 = 100

Year	Total Non-agricultural Employment	Total Manufacturing	Durable Manufacturing	Nondurable Manufacturing	Mining	Contract Construction	Total Goods-Producing Industries
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1979	136.8	117.5	126.2	107.2	194.8	145.4	128.1
1980	133.0	109.2	113.7	103.9	188.6	122.8	117.8
1981	131.5	106.9	110.3	103.0	190.5	111.3	114.7
1982	127.5	96.8	95.3	98.4	188.7	105.7	105.9
1983	126.8	95.2	94.0	96.6	149.0	98.6	100.3

TABLE 2
KENTUCKY NONAGRICULTURAL EMPLOYMENT
SERVICE-PRODUCING INDUSTRIES
INDEX NUMBERS: 1970 = 100

Year	Total Non-agricultural Employment	Transportation, Public Utilities, Communications	Wholesale Trade	Retail Trade	Finance, Insurance, Real Estate	Services	Govern-ment	Total Service Producing
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1979	136.8	119.0	162.8	145.2	143.5	152.4	133.5	141.8
1980	133.0	116.1	158.7	141.1	147.0	156.6	133.8	141.5
1981	131.5	114.6	160.5	140.3	147.0	160.0	130.0	141.0
1982	127.5	111.3	157.6	141.2	145.1	160.9	131.7	141.2
1983	126.8	106.3	156.0	144.7	148.9	166.8	127.4	141.8

This material was prepared by the editor with the assistance of Elsie M. Youmans; Ms. Youmans manipulated and graphed the data. All data were drawn from the Kentucky Economic Information System. The original source agency for the Kentucky data is the Kentucky Cabinet for Human Resources; the U.S. data come originally from the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 3
KENTUCKY EMPLOYMENT BY DURABLE MANUFACTURING SUBGROUPS
INDEX NUMBERS: 1970 = 100

Year	Lumber	Furniture	Stone	Primary Metal	Fabricated Metal	Machinery, Excluding Electrical	Electrical Machinery	Motor Vehicle
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1979	115.2	92.6	141.8	135.7	113.1	152.2	107.8	158.1
1980	101.3	77.5	127.6	130.3	100.1	139.6	96.1	115.6
1981	98.9	68.6	115.5	128.4	91.0	144.4	90.0	121.9
1982	82.8	60.5	106.5	114.1	82.8	123.6	75.6	107.8
1983	89.9	65.1	105.3	111.1	78.1	110.9	76.8	120.3

TABLE 4
KENTUCKY EMPLOYMENT BY NONDURABLE MANUFACTURING SUBGROUPS
INDEX NUMBERS: 1970 = 100

Year	Food	Tobacco	Textiles	Apparel	Paper	Printing	Chemical	Petroleum and Rubber	Leather
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1979	88.8	88.8	115.5	101.7	159.2	106.6	115.1	170.7	88.0
1980	88.0	79.7	106.3	101.1	154.2	108.3	111.0	160.0	82.8
1981	84.9	81.7	104.5	98.2	154.1	109.3	107.9	170.3	78.7
1982	84.1	72.8	105.0	94.5	148.8	106.7	99.5	161.6	69.0
1983	80.1	69.3	99.6	94.9	153.0	108.5	94.0	168.1	55.3

based primarily upon income measures, that is included in the (Kentucky) *Council of Economic Advisors Annual Report—1983*.

To some extent, nonagricultural employment trends in Kentucky follow similar developments nationwide. The change in total nonagricultural employment over the last twenty years in Kentucky and the U.S. is graphed in Figure 1. The employment changes in the goods-producing and the service-producing industries, in both Kentucky and the U.S., are graphed in Figure 2. Table 5 provides information on the distribution of nonagricultural employment in Kentucky and the U.S. in 1963, 1973 and 1983. Total nonagricultural employment in each of these years is also given. For the percent distribution of employment for each Kentucky industry, please refer to the December 1982 issue of this publication.

FIGURE 1

PERCENT CHANGE IN KENTUCKY AND U.S. NONAGRICULTURAL EMPLOYMENT, 1964-83

LEGEND: KENTUCKY K UNITED STATES U

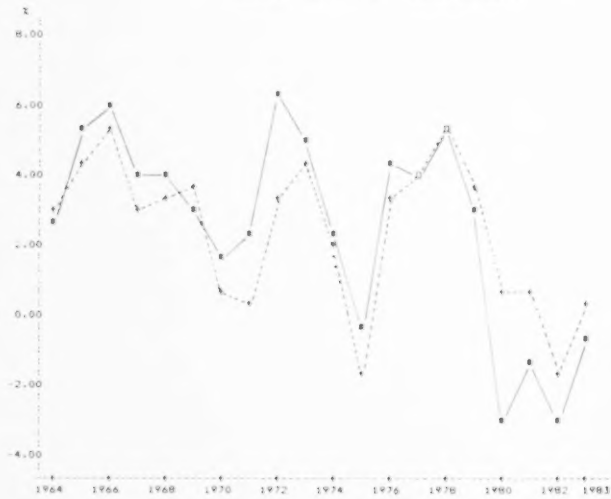

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FIGURE 2

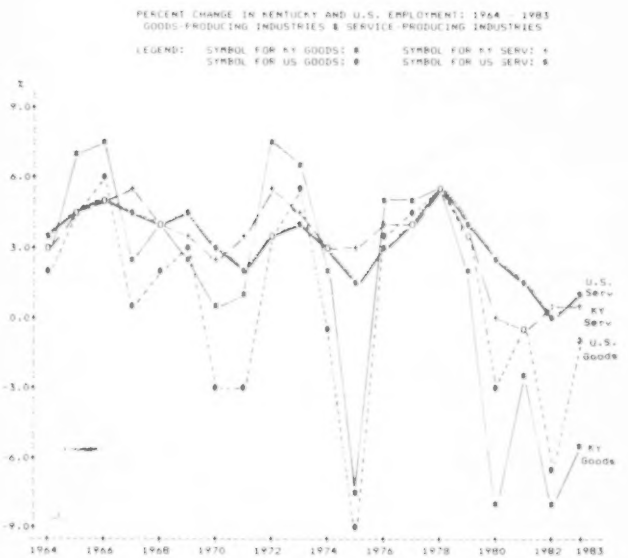

TABLE 5
DISTRIBUTION OF KENTUCKY AND U.S. NONAGRICULTURAL EMPLOYMENT

	1963	1973	1983
	Kentucky		
Goods-Producing	36.5%	36.3%	28.6%
Service-Producing	63.5%	63.7%	71.4%
Total Employment (in thousands)	702.9	1038.5	1153.9
	United States		
Goods-Producing	36.4%	32.4%	26.3%
Service-Producing	63.6%	67.6%	73.7%
Total Employment (in thousands)	56638.0	76777.7	89964.4

(Continued from page 1)

1984 as compared with 3.4 percent in 1983. For 1985 and 1986, the growth rate of real GNP would decline to about 2.7 percent. The national unemployment rate would decline to 7.4 percent in 1984 as compared with 9.6 percent in 1983. Interest rates would generally be slightly higher in both 1984 and 1985 than in 1983. The rise in the Consumer Price Index (CPI) would be about 5 percent for both 1984 and 1985, as compared with 3.2 percent in 1983.

Kentucky's coal production appears to be somewhat greater than one year ago and it is expected that gradual growth will continue in this sector. Improvement can also be expected in Kentucky's agricultural sector. Farm prices are generally higher than last year and with normal weather, a larger output will be available for sale.

Kentucky's seasonally adjusted monthly unemployment rate commenced to decline in June of 1983, earlier than previously reported, giving reason to expect this trend to continue in 1984 and through most of 1985. Revisions in the U.S. and Kentucky unemployment rates, and the trend that they followed from 1981 through 1983, are shown in Figure 1. If the Kentucky employment trend follows that of the nation, gradual improvement could be expected to occur over a broad front—house construction, automobile and related production, and industrial production generally. Growth would also continue through 1985 although at a slower pace.

FIGURE 1

SOURCE : BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR & KENTUCKY CABINET FOR HUMAN RESOURCES. DATA HAVE BEEN RETRIEVED AND PLOTTED WITH PROGRAM DTP OF THE KENTUCKY ECONOMIC INFORMATION SYSTEM (KEIS). KENTUCKY DATA WERE SEASONALLY ADJUSTED BY USE OF PROGRAM X - 11 , AND ARE STORED IN THE KEIS.

(Continued from page 2)

In line with the organizational changes described above, *Kentucky Economy: Review & Perspective* becomes a publication of the new Center for Business and Economic Research beginning with this first number of the eighth volume. "News & Notes" will continue to include news of the KCEA, as well as of the Center, and other notes we believe may be of interest to the readership, including updated information concerning the KEIS. In the body of the publication, we anticipate publishing articles emanating from research undertaken by Center or College faculty and staff, as well as articles analyzing aspects of the Kentucky economy submitted to us for consideration by others, including state government analysts.

• • •

Demonstrations and training in the use of the Kentucky Economic Information System (KEIS) were held recently at the Office for Revenue Estimating and Economic Analysis, Kentucky Revenue Cabinet, and at the Governor's Office for Policy and Management. Staff from the Finance Cabinet also attended. State agencies wishing to host KEIS/Frankfort demonstrations and/or review sessions are encouraged to contact the KEIS Manager, (606) 257-7679.

Roy Sigafus, KEIS senior programmer and systems analyst, has recently released several "execs" that make use of the KEIS on KECNET (i.e., the university-network) more direct for some purposes. One of these, the SELTAB exec, allows the user to produce selected tables from the full set of standardized tables output from program TABLE. A sample table is displayed on page 12 of this issue.

The other new "execs" all relate to the county database of the KEIS, the CBANK. One of these, the CBANK exec, permits the user to retrieve and print data on multiple data items and/or for multiple counties (or other regional group) with a minimum of input. The other set of new CBANK execs are called the BEA execs; they allow the user to produce a table with all income or employment data for a single county (or other regional group) for selected years, from time-series stored in the CBANK and originally estimated by the Bureau of Economic Analysis (BEA).

Persons who are already authorized to access any of the KEIS execs may obtain further information about these commands, online, by typing in "SELTAB info," "CBANK info," or "BEA info," after logging on to CMS. Other interested persons should contact Roy Sigafus, (606) 257-7677, or the KEIS Manager.

—moa—

(Continued from page 5)

Even when faced with such large numbers, it is sometimes possible to take for granted the day-to-day impact of infrastructure on our lives. When a major bridge collapses, or a highway caves in due to disrepair, or when a water system is so antiquated that it can barely supply the needs of a city, there is a more immediate appreciation for the adequacy of our nation's infrastructure. In this era of limited resources and competition for public funds, spending for infrastructure often is delayed or reduced. Continuation of this could have significant impact on our future. To quote the report on the National Infrastructure Study, "Hard choices have to be made, today, about meeting our nation's infrastructure needs of the future. There's a bill coming due. We should start to pay it now, or we'll have to pay a lot more later."

Notes

[1]As cited in Pat Choate and Susan Walters, "Public Facilities: Key to Economic Revival" *American Federationist*, August 1981.

[2]Congressional Budget Office, "Public Works Infrastructure: Policy Considerations for the 1980s" (April 1983).

[3]Kentucky Department of Education, "School District Construction Needs" (June 30, 1983).

[4]National Governors' Association and National Association of State Budget Officers, "Governors' Response to Fiscal Austerity" (August 1983).

[5]Kentucky Finance and Administration Cabinet, Office for Policy and Management (June 1983).

[6]National Governors' Association, 1983.

[7]Ibid.

[8]Kentucky Finance and Administration Cabinet, 1983.

[9]Congressional Budget Office, 1983.

[10]General Accounting Office, "Effective Planning and Budgeting Practices Can Help Arrest the Nation's Deteriorating Public Infrastructure" (PAD-83-2, November 18, 1982).

[11]The National Study was undertaken by the Graduate School of Public Affairs, University of Colorado, Denver. In Kentucky, the case study was conducted by the James W. Martin Center for Public Administration, University of Kentucky, working with the Office for Policy and Management in the state Cabinet for Finance and Administration.

[12]University of Kentucky Transportation Research Center, *Allocation of Transportation Costs to User*.

[13]*Hard Choices*, a summary report of the National Infrastructure Study, prepared for the Joint Economic Committee of the U.S. Congress, February 1984.

STANDARDIZED TABLE 201
KENTUCKY QUARTERLY ECONOMIC DATABANK
KENTUCKY PERSONAL INCOME: SUMMARY, BY QUARTERS

SERIES		QU 4,1982	QU 1,1983	QU 2,1983	QU 3,1983	QU 4,1983
1	INCOME, TOTAL KENTUCKY PERSONAL,BY PLACE OF RESIDENCE, SEAS ADJ,ANN RATE	33483.00	33085.00	33701.00	34351.00	34981.00
2	INCOME, REAL KENTUCKY PERSONAL, IN 1972 DOLLARS	16020.57	15747.26	15859.29	15999.53	16187.41
10	INCOME, NONFARM PERSONAL, TOTAL (Y$-YAG$)	32168.00	32372.00	32995.00	33785.00	34518.00
11	INCOME, FARM PERSONAL, TOTAL	1316.00	714.00	706.00	566.00	463.00
5	INCOME, WAGE & SALARY TOTAL, BY PLACE OF WORK	18750.00	18850.00	19183.00	19706.00	20132.00
6	INCOME, OTHER LABOR, BY PLACE OF WORK	2159.00	2183.00	2239.00	2352.00	2444.00
7	INCOME, PROPRIETORS, BY PLACE OF WORK (RESIDENCE)	2515.00	2067.00	2167.00	2109.00	2049.00
8	INCOME, PROPRIETORS, FARM	1167.00	564.00	556.00	414.00	310.00
9	INCOME, PROPRIETORS, NONFARM	1349.00	1503.00	1611.00	1695.00	1740.00
12	EARNINGS, TOTAL, NONFARM, TOTAL	22109.00	22386.00	22884.00	23602.00	24162.00
13	EARNINGS, TOTAL, NONFARM, PRIVATE	18028.00	18247.00	18639.00	19376.00	19901.00
14	EARNINGS, TOTAL, AG. SERV., FORESTRY, FISHERIES, & OTHER	90.00	98.00	98.00	107.00	107.00
15	EARNINGS, TOTAL, MINING (SIC 10-14)	1673.00	1629.00	1641.00	1727.00	1764.00
16	EARNINGS, TOTAL, CONTRACT CONSTRUCTION (SIC 15-17)	1182.00	1183.00	1132.00	1158.00	1186.00
17	EARNINGS, TOTAL, MANUFACTURING, TOTAL	5411.00	5564.00	5742.00	6060.00	6328.00
18	EARNINGS, TOTAL, MANUFACTURING, NONDURABLE GOODS	2396.00	2424.00	2496.00	2576.00	2621.00
19	EARNINGS, TOTAL, MANUFACTURING, DURABLE GOODS	3014.00	3140.00	3247.00	3484.00	3707.00
20	EARNINGS, TOTAL, TRANS., COMM., & PUB UTIL (SIC40-49)	1788.00	1824.00	1825.00	1855.00	1887.00
21	EARNINGS, TOTAL, WHOLESALE & RETAIL TRADE (SIC 50-59)	3439.00	3460.00	3527.00	3640.00	3733.00
22	EARNINGS, TOTAL, WHOLESALE TRADE (SIC 50-51)	1256.00	1257.00	1287.00	1312.00	1353.00
23	EARNINGS, TOTAL, RETAIL TRADE (SIC 52-57)	2183.00	2203.00	2240.00	2328.00	2380.00
24	EARNINGS, TOTAL, FIN., INS., & REAL ESTATE (SIC 60-67)	997.00	997.00	1043.00	1043.00	1056.00
25	EARNINGS, TOTAL, SERVICES (SIC 70-89)	3449.00	3490.00	3631.00	3787.00	3840.00
26	EARNINGS, TOTAL, GOVERNMENT, TOTAL	4081.00	4140.00	4245.00	4226.00	4262.00
27	EARNINGS, TOTAL, GOVERNMENT, FEDERAL CIVILIAN	870.00	879.00	898.00	902.00	892.00
28	EARNINGS, TOTAL, GOVERNMENT, FEDERAL MILITARY	704.00	701.00	705.00	716.00	712.00
29	EARNINGS, TOTAL, GOVERNMENT, STATE & LOCAL	2507.00	2560.00	2642.00	2608.00	2657.00
30	EARNINGS, TOTAL, GOVERNMENT, TOTAL CIVILIAN	3377.00	3439.00	3540.00	3510.00	3549.00
31	INCOME, TOTAL EARNINGS BY PLACE OF WORK (YAG$ + YLENAG$)	23424.00	23100.00	23590.00	24168.00	24625.00
32	PERSONAL CONTRIBUTIONS TO SOCIAL INSURANCE, BY PLACE OF WORK	1354.00	1381.00	1393.00	1434.00	1459.00
33	INCOME, NET EARNINGS BY PLACE OF WORK	22070.00	21719.00	22197.00	22734.00	23166.00
34	ADJUSTMENT FOR RESIDENCE, KENTUCKY PERSONAL INCOME	163.00	169.00	188.00	208.00	228.00
35	INCOME, NET EARNINGS, BY PLACE OF RESIDENCE	22233.00	21887.00	22385.00	22942.00	23394.00
36	INCOME, PROPERTY: DIVIDENDS, INTEREST, RENTS & ROYALTIES, TOTAL	5332.00	5285.00	5294.00	5466.00	5610.00
37	INCOME, TRANSFER PAYMENTS, TOTAL	5914.00	5913.00	6023.00	5949.00	5978.00
38	INCOME, TRANSFER PAYMENTS, STATE U.I. BENEFITS	502.00	461.00	484.00	350.00	283.00

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Kentucky Economy: Review & Perspective
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302 Mathews Building
University of Kentucky
Lexington, Kentucky 40506-0047

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KENTUCKY ECONOMY
Review & Perspective

CENTER FOR BUSINESS AND ECONOMIC RESEARCH
University of Kentucky, Lexington, Kentucky 40506-0047

SUMMER 1984
Vol. 8, No. 2

Kentucky Economic Review

by Merl M. Hackbart*

Analysts suggest that had the Federal Reserve (Fed) moved toward the upper limits of its 1984 monetary target growth rate, strong economic growth could have been accomodated throughout 1984. However, the Fed apparently decided to take early action to influence the rate of the recovery rather than to intervene at a later point—a common characteristic of Fed policy—and it tightened the growth of the money supply. The full impact of this change in Fed policy is unclear, however, as recent data suggest that while the recovery is still strong, spot weaknesses are beginning to surface in sectors sensitive to interest rates.

For example, revised data show that the increase in the national Composite Index of 12 Leading Indicators, witnessed throughout 1983, continued through April, indicating a progressively stronger economy. However, preliminary data for May signalled a slight stall in this overall economic indicator series by remaining at basically the same level as in April. Consistent with the composite index, revised figures for growth in real Gross National Product (GNP) for the first quarter of 1984, at a rate of increase of 9.7 percent, give evidence of substantial improvement, expanding considerably upon the 5.0 percent growth rate of the fourth quarter of 1983. The U.S. Commerce Department's "flash" estimate for second quarter real GNP, showing a 5.7 percent increase, suggests health in the national economy, with growth continuing at a somewhat more moderate pace.

Another encouraging sign has been the modest adjustments in the Consumer Price Index and in the Producer Price Index throughout 1984. Other indications of a strong national recovery in the first quarter included a continuing decline in the civilian unemployment rate—down to 7.9 percent, an increase in authorized housing permits, and a rise in auto sales to an annualized 10.6 million units, compared to 9.9 million units in the last quarter of 1983.

Data for the first quarter of 1984 suggest that the Kentucky economy is beginning to mirror the national recovery, reversing the declines that had continued throughout most of last year. In 1983, for the fourth straight year, the annual Kentucky civilian unemployment rate increased, reaching a level of 11.7 percent. However, in the first quarter of this year, it dropped to 9.6 percent, on a seasonally adjusted basis, extending the decline that had begun in the third quarter of 1983. Seasonally adjusted April data show a 9.3 percent Kentucky civilian unemployment rate, which is more than one and a half percentage points above the national estimate. However, the Kentucky unemployment rate has been falling almost a percentage point a quarter for the last three quarters, closing the gap on the U.S. rate.

Several aspects of the Kentucky employment situation warrant comment. Manufacturing employment for the first quarter of 1984 is 6.4 percent above a year ago, and 2 percent above fourth quarter, 1983. Durables manufacturing seems to have rebounded most impressively, with an 11.7 percent increase over last year. Construction employment also shows healthy improvement with a 12.3 percent increase over a year ago. Early second quarter adjusted construction employment data indicate some reversal of this trend, however, perhaps reflecting the effect of increasing interest rates. Employment in coal mining is 5 percent below the 1983 first quarter level. Looking at seasonally adjusted data, coal mining employment seems to have reached its lowest point in the third quarter of 1983, and has been on a gradual upswing since then.

The recent improvement in coal mining employment is paralled by increases in coal production; it is 25.5 percent higher in eastern Kentucky and 19.3 percent higher in western Kentucky than production in the first quarter, 1983. Care should be used in reading these statistics, as improvements in the coal industry may reflect increased stockpiling in anticipation of the labor contract negotiations later this year, as well as overall improvement in the general national economy.

Kentucky tax receipts are also beginning to reflect a general upturn in the state's economy. After adding May revenue, total General Fund receipts were running 6.1 percent ahead of last fiscal year. Sales and use taxes increased more rapidly than receipts in general, and showed 7.1 percent improve-

(continued on page 17)

Merl M. Hackbart is Professor of Finance and Public Administration, College of Business and Economics, University of Kentucky.

H. Brinton Milward, Associate Professor of Management and Public Administration, College of Business and Economics, University of Kentucky, has recently been named Director of the new Center for Business and Economic Research. Professor Milward, a native of Lexington and a graduate of the University of Kentucky, received his Ph.D. in Public Administration from Ohio State University in 1978. He returned to Kentucky and the College of Business and Economics in 1979, after teaching for several years at the University of Kansas. Professor Milward has published widely in both the management and public policy fields; among his policy interests are energy, housing, and higher education. He has received research funding from a variety of sources, including Ashland Oil, the Institute for Mining and Minerals Research, the Council of State Governments, the U.S. Department of Education, and the states of Ohio and Kansas.

As noted in this column last issue, the Center for Business and Economic Research has been established to be the principal research unit of the College of Business and Economics at the University of Kentucky, coordinating and engaging in a variety of research activities benefitting both the public and private sectors of the Commonwealth. We join in welcoming Professor Milward to his new position and wish him well as he undertakes to guide the Center's research, statistical information service, and publications programs.

* * *

With the reorganization of the College of Business and Economics as described, and the appointment of Professor Milward to direct the new research center, Professor Don M. Soule, Acting Director of the Center for Applied Economic Research, returns to full-time teaching and research within the Department of Economics. We wish to take this opportunity to acknowledge the many contributions Dr. Soule made while Acting Director, especially his willingness to educate the staff, as well as the public in general, on a variety of issues related to the Kentucky economy, but particularly in the area of its tax structure. Dr. Soule's ability to interpret, analyze and write about the Kentucky economy in a manner that is informative and interesting enhanced both the quality and coverage of this publication, and the work of the Center in general. We are therefore pleased to note that Professor Soule will continue to prepare analyses of the Kentucky economy as one of the research associates who cooperate in the work of the new Center.

* * *

The Coal Information Network of Kentucky (CINK), has been issuing a series of bibliographies under the name "Coalfinder." The fourth in this series, "Statistical Sources on Coal," has been prepared by Frances E. Ross, Data Analyst, Center for Business and Economic Research and is available, upon request, from Albert M. Bryson, Secretary of CINK, 1812 Hilton Avenue, Ashland, KY 41101.

It is with regret that we announce the resignation of Frances Ross from the staff of the Center for Business and Economic Research. Among many things, Ms. Ross has been the energy sector specialist for the Kentucky Economic Information System and her expertise and diligence will be missed. We wish her well in her new position with the McDowell Cancer Network, University of Kentucky Medical Center.

* * *

(continued on page 17)

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KENTUCKY ECONOMY: Review & Perspective

Published quarterly by the
Center for Business & Economic Research
College of Business and Economics
301 Mathews Building, University of Kentucky
Lexington, Kentucky 40506-0047 (606) 257-7675

ISSN 0270-1421
OCLC: 5289744

This publication provides current information concerning the Kentucky economy. It is a forum for the publication of short expository articles, analyses of some aspect of the Kentucky economy, forecasts of the Kentucky economy, and tables of selected data chosen as indicators of developments in the Kentucky and national economies. The publication also sometimes includes information about enhancements to the Kentucky Economic Information System (KEIS).

Articles submitted for publication should be sent to the Editor at the address given above. All submissions will be reviewed independently by persons recognized as knowledgeable in the specific subject discussed. However, the ultimate responsibility for content rests with the author.

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Produced by the Publications Center, College of Business and Economics; printed at the Printing Services Department, University of Kentucky. Paid for with state funds.

The 1984-86 Kentucky State Budget

by Ronald J. Carson*

There is little question that the most important policy process in Kentucky state government is the development of the biennial state budget. Since the budget is the Commonwealth's principal instrument of resource allocation, it reflects the state government's public priorities. The development of the 1984-86 Kentucky state budget also reflected evolution in this process to accommodate changing governmental, fiscal, legal, and political environments. The following paper describes the major features of the preparation and adoption process for the 1984-86 Budget of the Commonwealth of Kentucky and addresses issues related to its execution. The analysis focuses solely on the General Fund budget for Kentucky's Executive Branch.

Recent History

A description of some recent budget history is useful in attempting to understand what happened as the 1984-86 budget proceeded through the preparation and enactment phases.

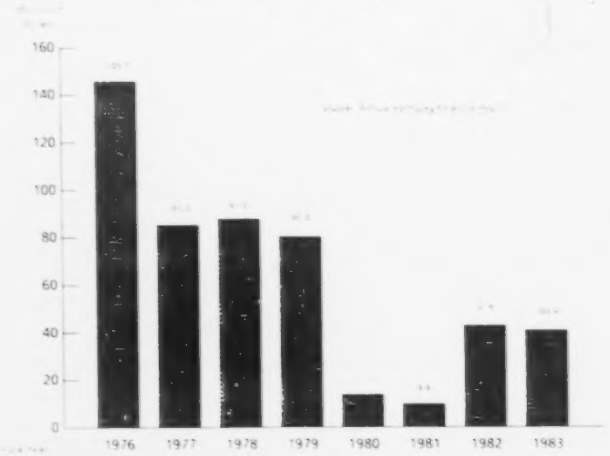
Fiscal Environment. From fiscal year (FY) 1976 through FY 1983, General Fund expenditures exceeded revenue receipts by $225 million. In fact, expenditure growth outstripped revenue growth in six of the eight years; expenditures rose by almost 115 percent, while revenue receipts grew by only 104 percent. Inflation, as measured by the national Consumer Price Index, increased 77 percent during this time. The Commonwealth managed to maintain a balanced budget through two sets of actions: "spending down" previously accrued surpluses and transferring non-revenue receipts (special, agency-specific funds) into the General Fund.

Since June 1980, and until October 1983, the Commonwealth experienced shortfalls in General Fund revenue amounting to over $1 billion. These revenue shortfalls—shortages in either estimated or actual revenue as compared to the original revenue estimates—were largely the result of the national economic recession. During roughly this same period, state government adjusted its operations, including reducing its full-time workforce by over 20 percent and eliminating or substantially curtailing programmatic efforts in a number of areas.

Kentucky also experienced a substantial decline in federal funds; since 1980, transfers from the federal government are down $900 million. Unlike many Southern states, Kentucky did not benefit from the massive national defense buildup which has occurred since 1980. Moreover, any flexibility the Commonwealth might have had to react to these converging and adverse economic circumstances was severely reduced by its lack of a substantial surplus (see Figure 1).

The situation in FY 1984 was more severe than in previous years. Even with the corrective budget shortfall actions taken in October, 1983, state expenditures were again estimated to exceed revenue receipts, this time by approximately $104 million. During FY 1984, surpluses were again carried forward and non-revenue receipts were transferred into the General Fund.

Figure 1: Unappropriated Surplus at End of Fiscal Year
Fiscal Years 1976-83



Statutory and Legal Environment. In 1982, the Kentucky General Assembly, attempting to strengthen its role in the budgetary process, enacted House Bill 649. It created a new section of the Kentucky Revised Statutes (KRS), Chapter 48, and effectively restructured the statutory basis for the state's budget process. The key aspects of this bill, which became effective on July 1, 1983, included provisions that:

- mandated that the Governor submit the executive budget recommendation by either the 10th (for a governor's second budget) or the 15th (for a governor's first budget) legislative day;
- required a budget reduction plan, thereby placing limits on a governor's authority to redirect the budget in cases of revenue shortages;
- authorized the Legislative Research Commission (LRC) to write the budget instructions to state agencies;
- required that the Legislative Branch draft a statutory budget memorandum, a companion document to the appropriations act, to indicate more fully the legislative intent; and
- required that the budget be in the form of a joint resolution rather than a bill.

Subsequent to the adjournment of the 1982 legislative session, both the Executive and Legislative Branches sought legal clarification from the Judicial Branch regarding the relative powers of the two branches. The 1982 General Assembly had passed a series of statutes concerning appointments, regulations, interim LRC powers, block grants, and reorganizations, as well as the budget bill just described. These statutes, taken together, greatly enhanced the power of the legislature's agent, the LRC, at the expense of the Executive. The resulting

*Ronald J. Carson is Deputy Director, Kentucky Governor's Office for Policy and Management.

TABLE 1

THE CHANGING 1984-86 GENERAL FUND BUDGET ENVIRONMENT

	General Fund Budget Scenario After October 15, 1983, Revenue Estimate (in millions of dollars—rounded)			General Fund Budget Scenario After January 19, 1984, Revenue Shortfall (in millions of dollars—rounded)			General Fund Budget Scenario After January 26, 1984, in Executive Budget Including Proposed New Tax Revenue (in millions of dollars—rounded)		
	Budgeted FY 1984	Estimated FY 1985	% Increase FY 1985 over FY 1984	Budgeted FY 1984	Estimated FY 1985	% Increase FY 1985 over FY 1984	Budgeted FY 1984	Estimated FY 1985	% Increase FY 1985 over FY 1984
Resources									
Carry Forward from Previous Year	$ 40.9	$ 4.9		$ 40.9			$ 40.9		
Non-Revenue Receipts	63.7			63.7			63.7		
Revenue Estimate	2,355.8	2,532.6	7.5	2,342.8	2,490.6	6.3	2,342.8	2,588.6	10.5
Total Resources	2,460.4	2,537.5		2,447.4	2,490.6		2,447.4	2,588.6	
Total Expenditures/Appropriations	2,455.5	2,537.5	3.3	2,447.4	2,490.6	1.8	2,447.4	2,579.3	5.4

"friendly suit," LRC vs Brown, became a major separation of powers case. The Supreme Court Opinion in this case, rendered January 19, 1984—one week before the budget had to be introduced—severely limited legislative authority for the interim between General Assembly sessions, but upheld the concept of legislative supremacy in the budgetary realm. However, the court ruled that the joint budget resolution requirement was unconstitutional.

The Governor's 1984-86 Budget

Revenue Forecasts. In accordance with the requirements of KRS 48.120, the Revenue Cabinet issued its General Fund revenue estimates for the 1984-86 biennium on October 15, 1983. These estimates were:

FY 1984 $2,355,760,000
FY 1985 $2,532,650,000
FY 1986 $2,707,430,000

Two significant assumptions were embodied in these figures: 1) all coal severance tax receipts would be retained in the General Fund, and 2) the Legislature would repeal the existing "sunset" provisions regarding the accelerated cost recovery system (ACRS) portion of the federal Economic Recovery Tax Act of 1981. The practical effect of the former assumption involved keeping $94 million in the General Fund over the biennium while the effect of the latter assumption involved retaining $186 million in the state's corporate income tax base over the biennium. Both items were crucial in the Governor's attempt (and, subsequently, the General Assembly's effort) to present a balanced budget.

On January 19, 1984, the Revenue Cabinet officially revised downward the October 15, 1983, preliminary revenue estimates. The new estimates were:

FY 1984 $2,324,800,000
FY 1985 $2,490,640,000
FY 1986 $2,655,780,000

The combined effect of the downward revisions in all three fiscal years was $106,570,000. Largely as a result of this new revenue environment, the Governor decided to seek a tax increase.

The macro-budgetary situation confronting the Governor can be seen in Table 1. The key statistic is the percentage growth in total expenditures/appropriations. While direct tax revenue growth was estimated to be reasonably healthy, because of the way in which the current year budget had been balanced, the forecasts suggested that the revenue available for expenditure/appropriation growth would be, at best, minimal. In view of the vast array of public service needs facing the Commonwealth, particularly in the area of elementary and secondary education, the Governor was unwilling to propose a budget recommending only a 1.8 percent aggregate expenditure increase; therefore, she decided to seek a $324 million revenue enhancement package.

Expenditure Recommendations. On January 26, 1984, Governor Collins presented her proposed Executive Budget to a joint session of the Kentucky General Assembly. Several aggregate aspects were especially noteworthy:

- without new revenue, FY 1985 proposed expenditures would have exceeded FY 1984 budgeted expenditures by only 1.8 percent;
- the proposed additional General Fund revenue of $324 million was only 6.3 percent of the total biennial estimated revenue; and,
- even with the proposed new revenue, FY 1985 proposed expenditures would have been $34 million less than the level of FY 1984 expenditures authorized by the 1982 General Assembly, because there had been a 10 percent ($270 million) revenue shortfall in FY 1984 compared to the revenues for FY 1984 forecasted in 1982.

To place the Governor's proposed budget in historical perspective, Table 2 compares expenditure growth over the last several bienniums. As shown, even with the proposed tax increases, the Governor's proposed 1984-86 Executive Budget contemplated only modest expenditure growth when compared to previous budgets.

TABLE 2

STATE BUDGET EXPENDITURE GROWTH IN GOVERNOR'S EXECUTIVE BUDGETS AS INTRODUCED*

Fiscal Biennium	Governor	Percentage Increase
1972-74	Ford	10.2%
1974-76	Ford	18.5
1976-78	Carroll	19.6
1978-80	Carroll	10.9
1980-82	Brown	9.1
1982-84	Brown	9.7
1984-86	Collins	5.4

*In each case, projected General Fund expenditures in the first year of the new biennium are compared with projected General Fund expenditures in the previous year.

Source: Commonwealth of Kentucky, *Executive Budget*, various years from 1972 through 1986.

TABLE 3

GOVERNOR'S PROPOSED DISTRIBUTION OF ADDITIONAL FY 1985 GENERAL FUND APPROPRIATIONS

Area of State Government	Proposed FY 1985 Nominal Dollar Increase Over FY 1984	Percent Of New Dollars
Local School District Payments (Including Governor's Educational Improvement Program)	$ 65,613,300	50.7
Teachers' Retirement System	9,668,700	7.5
Subtotal	75,282,000	58.2
Institutions of Higher Education	17,007,900	13.1
Local Government Economic Assistance Fund	5,900,000	4.6
Local Jails	3,869,000	3.0
Benefit Payments to Needy	9,201,800	7.1
Corrections	6,006,000	4.6
Commerce Cabinet Debt Service*	11,399,900	8.8
All Other Agencies and Programs of State Government	720,600	0.6
Total	$129,387,200	100.0

*The 1982 General Assembly authorized $150 million in bonds for various economic development projects. Bonds for many of these projects were not yet sold. Therefore, first time debt service was deferred until FY 1985. Thus, the Executive Budget proposal contained the financing of these commitments for the first time.

The spending priorities of the Governor's budget are outlined in Table 3. Clearly, education was to receive the bulk of the new money. In fact, after accounting for this number one priority, statutory and/or legal obligations (the Local Government Economic Assistance Fund and the Commerce Cabinet debt service requirements), and secondary programmatic priorities (local jails, benefit payments to the needy, and corrections), the rest of state government's programs and activities would receive essentially no increase. In real dollar terms (i.e., controlled for inflation), this actually represented a decreased level of funding for those programs in FY 1985.

For the biennium as a whole, the Governor's Executive Budget proposal featured the following major spending priorities:

* a $297 million Student Learning Improvement Program for elementary and secondary education;
* a 30 percent increase in funding for local jails;
* a substantial increase in funding for the Corrections Cabinet, including a new $35 million medium security prison;
* increases in human service program funding for the elderly, for juveniles and for the mentally ill; and
* a 5 percent annual salary increase for school teachers and state employees.

Tax Changes. The Executive Budget proposal included a major tax reform program, including updated rate structures for the individual income and corporation license taxes and extension of the sales tax to previously untaxed items. These changes were intended to make the Kentucky revenue structure more progressive and were estimated to produce $98 million in new revenues for FY 1985 and $226 million in FY 1986. The proposed changes were:

* Individual Income Tax—The standard deduction would be raised from $650 per taxpayer to $1,000. Two new rate categories would have been added to tax income between $15,000 and $50,000 at 7 percent, and all income over $50,000 at 8 percent. The changes were to be effective January 1, 1985, and would have yielded $43 million in new revenue in FY 1985 and $109 million in FY 1986. The last change in the standard deduction had been in 1976 when it was increased from $500 to $650. The change in the rate structure would have been the first since 1950 when the 6 percent rate was added for all income over $8,000. Prior to 1950, all income over $5,000 was taxed at 5 percent.
* Corporation License Tax—This tax, an annual levy on corporations for the privilege of doing business in Kentucky, has been, since 1926, 70 cents per $1,000 of capital employed. The proposal was to raise the rate to $1.75 per $1,000 of capital employed, effective on or after January 1, 1984, and was estimated to produce $12 million in FY 1985 and $27 million in FY 1986.
* Sales Tax—The Governor's proposal was to extend the 5 percent sales and use tax to services not previously taxed in Kentucky; no increase in the rate was proposed for any item. Services proposed for inclusion were repair and installation of tangible personal property (auto repair, appliance installation, shoe repair, etc.), lease and rental of tangible personal property, laundry, dry cleaning, television cable service, computer and data processing services, and miscellaneous business services. The extension of the sales tax was to become effective December 1, 1984, and was estimated to generate $43 million in FY 1985 and $90 million in FY 1986.

Immediately after the Governor introduced the Executive Budget proposal, both the Kentucky Senate and House commenced several weeks of extensive budget hearings which focused on the revenue mix being proposed, individual components of the Governor's educational reform package, and spending priorities for state agencies. On February 24, 1984, the Governor amended the original revenue proposal and presented a new tax package. It contained four major features:

* a 5 percent "flat-rate" individual income tax to replace the existing graduated individual income tax structure;
* a phase-out, over a 3-year period beginning July 1, 1986, of the limitation on the depreciation allowed corporations when computing taxable income (ACRS);
* a retention of the corporate license tax feature of the original revenue proposal; and
* a reduction in the total amount of state inheritance tax Kentucky citizens would pay.

The net revenue effect of this new set of proposals was exactly the same as was contemplated under the original proposal—$98 million in FY 1985 and $226 million in FY 1986. However, the tax mix was changed, the sales tax extension option was discarded, and a small measure of inheritance tax relief was added. The Governor also announced that this new tax package would be combined in one legislative bill, ultimately House Bill 879, with all the educational reform proposals.

The Budget in the General Assembly

The appropriations bill for the Executive Branch (House Bill 474) was reported out of the House Appropriations and Revenue Committee on March 22, after seven weeks of daily budget hearings. The day before, the Governor had withdrawn the revised tax proposal, House Bill 879, acknowledging that there was not sufficient support for its passage in the full House. By a vote of 89-10, House Bill 474 was passed on March 23. On March 27, the Senate passed its committee substitute to House Bill 474 by a vote of 34-2. On March 28, the two chambers refused to concur on the respective versions of the budget and a Conference Committee was appointed to resolve the differences.

Final passage of the Executive Budget, under the no-tax increase revenue scenario, proved to be very difficult. The variance between both expenditure and revenue levels in the budgets passed by the two chambers strained the lawmakers' abilities to find a common ground for agreement. Nonetheless, a compromise was achieved, which, for the most part, reflected the spending priorities of the House rather than of the Senate. The major features of the final compromise included:

- mandating a 2 percent and a 3 percent salary adjustment for state employees and school teachers for FY 1985 and FY 1986, respectively; the House had proposed 3 percent for each year while the Senate proposed no increase for FY 1985 and 5 percent for FY 1986;
- retaining $47 million a year of coal severance tax receipts in the General Fund; the Senate had proposed transferring these monies to the Road Fund to help defray debt service payments on road bonds;
- phasing in the full ACRS over two years beginning in FY 1986, a revenue feature of the Senate's version of the budget; the adoption of this feature means that the Governor and the General Assembly will have to address the fundamental issue of the state corporate income tax base again in the 1986 session of the General Assembly; and
- making a series of programmatic and funding shifts involving the Council on Agriculture, the Secretary of the Education and Humanities Cabinet, funding for cancer research and indigent care at state university hospitals, local school construction debt service, and community college construction.

The final version of the budget, in the form of a Free Conference Committee report, was passed on March 30 by a vote of 70-24 in the House and 32-4 in the Senate. Table 4 shows the level of appropriations for the cabinets and agencies of the Executive Branch in the General Assembly's enacted Budget of the Commonwealth and compares them to the level of appropriations recommended by the Governor in the Executive Budget proposal. Obviously, most areas received substantially less in the final, no-tax increase version of the budget than under the Executive Budget proposal. More importantly, several areas will receive even less in FY 1985 than in FY 1984. Only the Revenue Cabinet received more under the General Assembly's budget than what it would have received under the Governor's budget, although capital construction funds were also added in the General Assembly's budget.

On March 30, the General Assembly adjourned and then reconvened on April 12 to consider gubernatorial vetoes. For the first time since the 1940s, a Kentucky governor exercised the constitutional "legislative" power by vetoing two separate line items in the budget bill. One item involved community college projects in Prestonsburg and Hazard. The second involved general purpose educational buildings. In both instances, the Governor contended that the items had circumvented the normal budget review process, had not been contemplated in the Executive Budget nor the budgets that passed either the House or the Senate, and simply had been inserted at the last possible moment in the Free Conference Committee. The Governor's vetoes of the two line items were sustained in the House on April 13, by a vote of 42-50, bringing the 1984-86 budget preparation and adoption processes to a close.

The final status of the General Fund, including the budgets for all three branches of state government, is shown in Table 5. Revenue is estimated to grow by 6.5 percent in each year

TABLE 4
APPROPRIATIONS RECOMMENDED IN THE GOVERNOR'S EXECUTIVE BUDGET COMPARED TO THE EXECUTIVE BRANCH APPROPRIATIONS IN THE GENERAL ASSEMBLY'S ENACTED BUDGET

		FY 1985			FY 1986		
Cabinet/Agency	FY 1984 Budget	Governor's Budget	General Assembly's Budget	Difference	Governor's Budget	General Assembly's Budget	Difference
Government Operations	$ 102,889,900	$ 98,220,000	$ 95,477,400	$ (2,742,600)	$ 111,058,600	$ 105,267,700	$ (5,790,900)
Commerce	21,825,100	32,133,300	31,218,400	(914,900)	35,396,700	31,387,000	(4,009,700)
Corrections	59,531,500	83,871,500	77,768,300	(6,103,200)	94,324,900	82,675,100	(11,649,800)
Education/Humanities	1,171,886,820	1,250,884,200	1,190,586,600	(60,297,600)	1,429,874,300	1,261,130,900	(168,743,400)
Energy	13,560,000	10,278,700	8,873,000	(1,405,700)	13,341,200	8,559,800	(4,781,400)
Finance/Administration	16,264,500	15,060,000	14,882,500	(177,500)	16,867,000	16,628,000	(239,000)
Higher Education	421,198,900	435,026,200	427,452,300	(7,573,900)	466,164,800	453,808,900	(12,355,900)
Human Resources	387,463,400	398,242,000	393,032,000	(5,210,000)	429,059,300	417,170,300	(11,889,000)
Justice	61,888,100	63,273,100	59,173,200	(4,099,900)	67,453,600	62,699,200	(4,754,400)
Labor	1,386,200	1,460,700	1,381,500	(79,200)	1,535,000	1,394,800	(140,200)
Natural Resources/Environmental Protection	23,853,400	23,781,400	23,773,100	(8,300)	26,289,500	26,135,300	(154,200)
Public Protection/Regulation	25,211,200	25,610,800	24,847,700	(763,100)	26,979,200	25,089,500	(1,889,700)
Revenue	33,544,300	36,645,200	40,487,000	3,841,800	38,245,100	43,199,000	4,953,900
Tourism	26,421,300	26,662,200	26,559,100	(103,100)	31,920,300	30,225,100	(1,695,200)
Transportation	2,364,200	2,162,200	2,340,700	(178,500)	2,270,200	2,442,700	172,500
Capital Construction	1,505,000	0	200,000	200,000	0	500,000	500,000
Executive Branch Total	$2,370,793,820	$2,503,311,500	$2,418,052,800	$(85,258,700)	$2,790,779,700	$2,568,313,300	$(222,466,400)

of the biennium, which includes minor revenue adjustments enacted by the 1984 General Assembly. Expenditures are authorized to increase by only 1.9 percent in FY 1985 and by 6.3 percent in FY 1986.

TABLE 5

1984-86 BUDGET SUMMARY: GENERAL FUND

	FY 1984 Budgeted	FY 1985 Enacted	FY 1986 Enacted
Resources			
Beginning Resources	$ 40,871,000	$	$
Administrative Cost Receipts		5,392,100	5,755,000
Non-Revenue Receipts	63,701,000	4,728,000	1,250,000
Revenue Estimate	2,342,850,000	2,494,438,385	2,655,958,585
Total Resources	$2,447,422,000	$2,504,558,485	$2,662,963,585
Expenditures/Appropriations			
Regular, Special and Continued Appropriations and Necessary Governmental Expenses	2,444,863,300*	2,493,090,900	2,649,857,600
Current Year Appropriations	2,588,700		
Total Expenditures/ Appropriations	2,447,422,000	2,493,090,900	2,649,857,600
Budget Reserve	$ 0	$ 11,467,585	$ 13,105,985

*This figure assumes a FY 1984 lapse to surplus of at least $2,374,400.

Budget Execution

Traditionally, there is a pause between final budget enactment and the budget cycle's execution phase, which commences on the first day of the new fiscal biennium. However, as with many other aspects of the 1984-86 state budget, again tradition did not hold. By mid-June, as this article is being written, and as the new biennium approaches on July 1, several legal challenges have placed the status of the budget in jeopardy.

On May 14, the Kentucky Reinsurance Association, a group representating the interests of state insurance carriers, filed suit to prevent the transfer of over $7 million in agency funds to the General Fund. As a result of the suit, the Franklin Circuit Court issued an order prohibiting the Secretary of Finance and Administration from authorizing this fund transfer. At this writing, this suit is still pending.

On May 17, in Attorney General's Opinion 84-184, the state's chief legal officer declared that certain parts of the 1984-86 state budget, as passed by the 1984 General Assembly, were unconstitutional. The Attorney General's Opinion prompted a number of questions about the legality of House Bill 474 and Senate Bill 294, companion legislation to the appropriations act, concerning the relationship of the budget to the Kentucky Revised Statutes, and raised several areas of concern. Among these were:

- Part VIII of House Bill 474. This new section of the budget bill was included for budget balancing purposes by the 1984 General Assembly. It authorized the transfer of over $11 million from a wide variety of restricted revenue funds and special funds into the General Fund, under a central administrative expense assessment concept.
- Various sections of Part II of House Bill 474. Portions of Part II authorized the transfer of almost $6 million of agency funds as non-revenue receipts credited to the General Fund.
- The use of "Notwithstanding the Provisions of KRS" language in both House Bill 474 and Senate Bill 294. According to the Opinion, "the State Budget Bill, containing language which is designed to amend, modify or suspend existing statutory law, is unconstitutional."

Although the full financial impact of this final objection is not precisely known, it could be tremendously significant if the Opinion were to be accepted as correct or broadly interpreted by a court. For example, a court could rule that the Commonwealth must fully fund the annual 5 percent salary adjustment for all state employees pursuant to KRS 18A.355. This item alone could cost an additional $25 million over the biennium beyond what is currently provided for in the budget.

Of course, the fiscal implications of the Attorney General's complaint are limited to the 1984-86 biennium. Possibly more important are the long-range policy implications and constraints implicit in his legal challenge. Both the Executive, in proposing a budget, and the Legislature, in enacting a budget, have traditionally expressed far-reaching policy decisions as part of the "omnibus appropriations bill" approach to the budget for the Executive Branch. These expressions are often delineated in "language appropriations" that identify program priorities, constrain agency action, or suspend conflicting statutes in order to balance the budget or accentuate important policy choices of the Governor and/or General Assembly.

If the current legal challenge sets aside this long-standing practice, the political task of enacting a balanced budget would be made significantly more difficult for the Legislature by forcing tough, on-the-record decisions at multiple points in the appropriations process. Although such a prospect may be superficially appealing, its pragmatic complications are potentially enormous for Kentucky's historic unified budget.

Most recently, on June 6, 1984, the Attorney General filed suit over the budget in Franklin Circuit Court, seeking a declaratory judgment. At this writing, this suit is still pending. The items at issue were identical to those matters addressed in his Opinion of May 17; the suit names the Governor, the Secretary of the Finance and Administration Cabinet, and the state Treasurer as defendants.

Conclusion

What was learned from the 1984-86 state budget process? Foremost is the notion that the budget process in Kentucky is rapidly changing. It is no longer basically a static bureaucratic process, financed with an adequate revenue stream, and politically controlled by the Governor. The world turns; realities change. Today there is a totally different state budget situation than existed just ten years ago and the 1984-86 budget process seems in many ways to have accelerated the on-going process of change. Among the most notable features of this new environment which seem to be becoming more dominant in state budgeting in Kentucky are the following:

- the inadequacy and uncertainty of the Commonwealth's revenue structure;

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A Preliminary Look at Developmental Progress in Rural Kentucky, 1960-80

by Cynthia L. Duncan*

Chronic poverty has plagued rural Kentucky[1] since the turn of the century, especially counties in which residents depend upon small farms or coal mining for their livelihoods.[2] State and federal policy makers have taken a variety of steps to promote economic growth in these areas. The premise has been that increased income and employment would reduce poverty and improve socio-economic conditions. When the Appalachian Regional Commission (ARC) was established in the late 1960s to address the problems of persistent poverty in Appalachia, its strategy was to use public investments to induce economic growth, with the explicit assumption that "economic growth . . . would lead to more general development."[3]

Experience in this country and abroad demonstrates that economic growth does not guarantee economic development. Growth has occurred in numerous countries without reducing poverty or improving the standard of living of most residents. In describing the establishment of the ARC, Newman noted that the belief that economic growth would lead to development was "far more readily accepted in the early 1960s than a decade later."[4] By the 1970s, scholars as well as development agencies acknowledged that the *distribution* of the benefits of economic growth is the fundamental factor determining whether increased economic activity has developmental impact. The benefits of economic growth can be concentrated within a small sector of the population, with little benefit reaching low income families. Poverty and depressed conditions can persist even when there is remarkable economic growth.[5]

This perspective on development is relevant in analyzing progress in the rural Kentucky counties which have had persistent poverty because rural Kentucky has experienced two decades of expanding economic activity. Most rural Kentucky counties depend heavily on a single sector of the economy, and some sectors grew much faster than others between 1960 and 1980. These economic changes will be examined against the background of the different economic bases which dominate counties in order to analyze whether economic growth has brought developmental progress in Kentucky.

Rural Kentucky has moved away from dependence upon agriculture, and has become more dependent upon manufacturing and mining income.[6] As shown in Table 1, agriculture provided 9.2 percent of total earned income in Kentucky in 1959, and 18.3 percent in rural counties; by 1980, agriculture contributed only 3.9 percent of earned income for Kentucky as a whole, and only 5.6 percent for the rural counties. Mining income as a proportion of earned income grew for Kentucky as a whole from 1959 to 1980, but growth was more dramatic in the rural counties where it contributed 17 percent of earned income in 1980, up from 10.6 percent in 1959. Most of this growth was in the 1970s. The relative importance of manufacturing grew from 23.5 percent to 25.7 percent for all of Kentucky over this period, but the change in dependence upon manufacturing income grew to a greater degree in rural Kentucky—from 13.1 percent in 1959 to 20.1 percent in 1980. Most of that increase occurred in the decade of the 1960s when rural industrialization was in full swing nationwide.[7] Income from employment in government and non-government services remained steady as a proportion of total earned income in rural Kentucky over the twenty year period, but it contributed slightly less as a percentage for Kentucky as a whole in 1980 than in 1959.

TABLE 1

DISTRIBUTION OF TOTAL LABOR AND PROPRIETORS' INCOME

	1959		1970		1980	
Industry	All Kentucky	Rural Kentucky	All Kentucky	Rural Kentucky	All Kentucky	Rural Kentucky
Agriculture	9.2%	18.3%	5.5%	10.5%	3.9%	5.6%
Mining	4.9	10.6	4.3	9.8	7.7	17.0
Coal Mining	3.9	NA	3.8	NA	7.1	NA
Construction	5.3	5.5	6.8	6.2	5.9	5.4
Manufacturing	23.5	13.1	25.7	18.0	25.7	20.1
Government	14.9	18.1	18.1	21.4	16.4	18.2
Non-government Services	41.0	33.7	39.5	32.5	40.0	33.7

SOURCE: Bureau of Economic Analysis (BEA), U.S. Department of Commerce, through the Kentucky Economic Information System (KEIS).

For purposes of this analysis, indicators of economic conditions and growth include per capita personal income and median family money income. Social conditions and developmental changes are represented by the proportion of families who are low income, the percent of the adult population with a high school education, and the proportion of housing units with complete plumbing facilities.[8] These indicators are not comprehensive, but they permit an initial assessment of the relationship between economic growth and economic development in rural Kentucky.

Counties are categorized as FARM, COAL, MANUFACTURING, or GOVERNMENT-MIXED INDUSTRY, according to the dominant source of labor and proprietors' income in the county in 1980. The criteria and categorization are described in the Appendix. The distribution of these counties by economic base is shown in Figure 1, and the counties are listed by economic base in the Appendix.

Overall Improvement in Rural Kentucky

Economic and social conditions in rural Kentucky counties have lagged behind the nation for decades, but in most respects the gap has narrowed in the last twenty years. In 1959 per capita personal income in rural Kentucky was 51 percent of the national average, but by 1980 it had risen to 64 percent. Median family money income, which was 49 percent of the national level in 1959, had risen to 69 percent in 1979.

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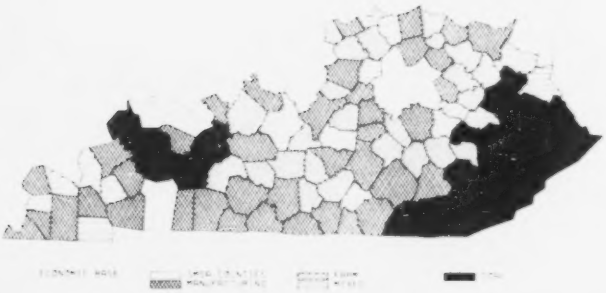
Figure 1

ECONOMIC BASE IN NONMETROPOLITAN KENTUCKY COUNTIES, 1980



The gap in median family money income has narrowed on a constant dollar basis as well as on a percentage basis; the gap in per capita personal income actually widened on a constant dollar basis.[9]

These income changes were reflected in a general decrease in the poverty rate. Low income families made up about 54 percent of all families in rural Kentucky counties in 1959, two and one half times the proportion in the nation, and almost one and one half that in the state. By 1979, 27 percent of all families in rural Kentucky were in a low income category, compared to 14 percent nationwide and 20 percent in the state as a whole.

Progress in housing conditions was dramatic. Only 33 percent of the houses in rural Kentucky had complete plumbing in 1960, compared to 86 percent in 1980. While rural Kentucky counties had only a third as many plumbed housing units as the nation in 1960, by 1980 rural Kentucky had reached 87 percent of the national figure.

In education, Kentucky has not narrowed the gap; it ranks 50th in the nation in adult educational attainment. However, there has been improvement within the state. In 1960 only 20 percent of rural Kentucky adults had completed high school, less than half the national figure, but in 1980, 43 percent had completed high school, representing close to two-thirds of the national figure. Table 2 presents data on economic and social conditions in Kentucky nonmetropolitan counties, Kentucky and the nation.

A Comparison of Economic and Social Conditions According to Economic Base in 1979/1980

Economic conditions can be measured in a variety of ways, depending upon the research questions. The purpose here is to analyze the extent to which economic growth has resulted in economic development in rural Kentucky counties, and to assess whether that relationship varies by economic base. Increases in income are among the most accessible measures of economic growth at the county level. Two different income measures for the counties are compared here: per capita personal income and median family money income. Personal income includes current income received by persons from all sources, and takes into account unearned income, including transfer payments, nonmonetary and all imputed types of income. Money income includes total money income received by all persons 15 years and older in a family as reported on the decennial Census questionnaire. It should include all amounts received from wages and salaries, interest and dividends and public assistance, etc., but its accuracy depends upon the respondents' recollections and reporting. It does not include nonmonetary or imputed income.

Per capita personal income is an arithmetic mean, derived by taking all the personal income of residents in a county, and dividing by the county population. Among descriptive measures of income it has the advantage of using all sources of income. However, mean values are influenced by extreme scores in either direction, so that one very high score or one very low score can pull the mean up or down. For instance, the per capita personal income figure would be the same whether a million dollar increase in income was concentrated among a relatively few people or was spread evenly among

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TABLE 2

COMPARISON OF CHANGE IN ECONOMIC AND SOCIAL INDICATORS IN NONMETROPOLITAN KENTUCKY, KENTUCKY, AND THE U.S., 1959/60 (T_1) to 1979/80 (T_2)

Social Indicator	Nonmetropolitan Kentucky Counties			Kentucky			United States		
	T_2(a)	T_1(b)	Change	T_2(a)	T_1(b)	Change	T_2(a)	T_1(b)	Change
Per Capita Personal Income in Current Dollars	$6,054	$1,108		$7,567	$1,563		$9,483	$2,160	
Per Capita Personal Income in Constant 1972 Dollars	$3,382	$1,569	115.6%	$4,227	$2,214	90.9%	$5,298	$3,059	73.2%
Median Family Money Income in Current Dollars	$13,685	$2,794		$16,399	$4,051		$19,908	$5,660	
Median Family Money Income in Constant 1972 Dollars	$8,422	$3,957	112.8%	$10,091	$5,738	75.9%	$12,251	$8,017	52.8%
Low Income Families (Percent of Total)	27%	54%	-27pts.	20%	38%	-18pts.	14%	21%	-7pts.
Education: Percent Adults 25 Years and Older with High School Education	43%	20%	23pts.	53%	28%	25pts.	67%	41%	26pts.
Percent Housing Units with Complete Plumbing	86%	33%	53pts.	92%	62%	30pts.	98%	85%	13pts.

(a) T_2: Time 2 is 1980 for per capita personal income, percent high school graduates, and percent housing units with complete plumbing; 1979 figures for median family money income and percent low income families.

(b) T_1: Time 1 is 1960 for percent high school graduates, and percent housing units with complete plumbing, 1959 figures for per capita personal income, median family money income and percent low income families.

SOURCE: See Note 8.

selected indicators OF ECONOMIC A

These tables of selected indicators of economic activity were prepared by a special-purpose program of the Kentucky Economic Information System. The data in the tables are reported figures which were obtained from a variety of state and federal agencies, as well as from private firms.

UNITED STATES DATA

	Jan. 1984	Feb. 1984	March 1984	Qtr. I 1984	% Chg. 83-IV 84-I	% Chg. 83-I 84-I	
CONSUMER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)							
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, ALL ITEMS (NEW DEF)	305.20	306.60	307.30	306.37	1.09	4.48	
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, FOOD AND BEVERAGES	291.60	294.20	294.30	293.37	2.64	4.09	
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, HOUSING (INCL RENTAL EQUIV)	329.20	331.00	331.50	330.57	1.07	3.84	
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, APPAREL AND UPKEEP	196.40	196.20	198.80	197.13	-1.55	2.41	
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, TRANSPORTATION	306.00	305.80	306.90	306.23	0.12	5.56	10
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, MEDICAL	369.50	373.20	374.50	372.40	2.12	6.26	16
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, ENTERTAINMENT	249.90	251.50	251.70	251.03	0.67	3.28	19
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, OTHER	300.50	301.50	302.10	301.37	1.19	7.20	19
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS, SPECIAL INDEX: ENERGY	416.70	420.20	418.10	418.33	-0.63	2.78	0
							3
PRODUCER PRICE INDEXES (1967=100, NOT SEASONALLY ADJUSTED)							0
PRODUCER PRICE INDEX, ALL COMMODITIES	308.10	308.80	311.10	309.33	1.13	2.95	4
PRODUCER PRICE INDEX, ALL FINISHED GOODS	289.40	290.60	291.70	290.57	1.17	2.38	1
PRODUCER PRICE INDEX, FINISHED CONSUMER GOODS	288.80	290.10	291.40	290.10	1.29	2.40	
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS	316.60	317.40	319.50	317.83	0.71	2.68	
PRODUCER PRICE INDEX, INTERMEDIATE MATERIALS FOR MANUFACTURING	298.60	299.50	301.70	299.93	1.04	3.44	5
PRODUCER PRICE INDEX, CRUDE MATERIALS	333.70	332.80	339.40	335.30	3.01	5.25	2
PRODUCER PRICE INDEX, CRUDE FOODSTUFFS AND FEEDSTUFFS	264.20	260.70	270.70	265.20	4.48	7.80	9
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, SPOT(1967=100)	448.50	437.50	471.00	452.33	2.24	2.30	0
PRODUCER PRICE INDEX, BITUM. COAL, INDUSTRIAL, CONTRACT(JUNE76=100)	151.70	152.90	152.40	152.33	0.15	1.38	5
PRODUCER PRICE INDEX, ALL CONSTRUCTION MATERIALS	302.30	304.80	306.40	304.50	0.02	3.82	1
							0
CONSUMER PRICES: ENERGY (U.S. CITY AVERAGE)							0
AVG PRICE FOR UTILITY (PIPED) GAS, PER 40 THERMS	26.90	27.11	27.15	27.05	-0.49	3.48	
AVG PRICE FOR UTILITY (PIPED) GAS, PER 100 THERMS	61.56	61.80	61.88	61.75	-1.98	2.80	
AVG PRICE FOR ELECTRICITY, PER 500 KWH	38.59	38.83	39.07	38.83	1.04	4.12	
AVG PRICE FOR FUEL OIL #2 (HOME HEATING OIL), PER GALLON	1.12	1.22	1.16	1.17	7.36	1.30	19
AVG PRICE, GASOLINE, ALL TYPES, PER GALLON	1.20	1.19	1.19	1.20	-2.47	1.96	23
AVG PRICE, GASOLINE, LEADED REGULAR, PER GALLON	1.13	1.13	1.13	1.13	-2.68	2.18	28
AVG PRICE, GASOLINE, UNLEADED REGULAR, PER GALLON	1.22	1.21	1.21	1.21	-2.47	1.93	33
AVG PRICE, GASOLINE, LEADED PREMIUM, PER GALLON	1.37	1.36	1.36	1.36	-1.52	1.74	31
							12
LABOR FORCE (SEASONALLY ADJUSTED, MILLIONS OF PERSONS)							28
LABOR FORCE, TOTAL (INCL RES ARMED FORCES)	113.90	114.38	114.60	114.29	0.53	1.87	35
LABOR FORCE, CIVILIAN (EXCL RES ARMED FORCES)	112.21	112.69	112.91	112.61	0.53	1.72	
EMPLOYMENT, RESIDENT ARMED FORCES	1.69	1.68	1.69	1.69	-0.24	1.22	
EMPLOYMENT, TOTAL CIVILIAN	103.19	103.89	104.14	103.74	1.20	4.56	23
EMPLOYMENT, AGRICULTURE	3.27	3.39	3.28	3.32	0.95	-2.68	04
EMPLOYMENT, NONAGRICULTURAL	99.92	100.50	100.86	100.42	1.21	4.82	57
UNEMPLOYED, CIVILIAN, TOTAL	9.03	8.80	8.77	8.87	-6.74	-22.81	05
UNEMPLOYMENT RATE, TOTAL LABOR FORCE	7.90	7.70	7.70	7.76	-7.23	-24.22	93
UNEMPLOYMENT RATE, CIVILIAN LABOR FORCE	8.04	7.81	7.77	7.87	-7.23	-24.11	37
OTHER SELECTED NATIONAL INDICATORS:							
U.S. GROSS NATIONAL PRODUCT (B $) (% CHG, ANNUAL RATE)	NA	NA	NA	3550.10	13.93	11.94	94
U.S. REAL GROSS NATIONAL PRODUCT (B 72$) (% CHG, ANNUAL RATE)	NA	NA	NA	1609.30	9.70	8.00	58
PERSONAL INCOME, TOTAL, SEASONALLY ADJUSTED (B $)(% CHG, ANNUAL RATE)	2906.80	2928.00	2943.70	2926.20	13.50	10.10	23
COMPOSITE INDEX OF 12 LEADING INDICATORS (1967=100)	164.70	167.00	167.40	166.37	1.90	12.71	34
INDEX OF INDUSTRIAL PRODUCTION, SEASONALLY ADJUSTED (1967=100)	158.50	160.00	160.80	159.77	2.74	15.35	72
AVERAGE PRIME RATE CHARGED BY BANKS ON SHORT-TERM BUSINESS LOANS	11.00	11.00	11.21	11.07	0.64	1.75	66
INTEREST RATE, YIELD ON 3-MONTH TREASURY BILLS	8.93	9.03	9.44	9.13	3.87	13.02	85
PRIVATE HOUSING UNITS AUTH. 16000 PERMIT-ISSUING PLACES (SADJ THOU)	1817.00	1946.00	1713.00	1825.33	65.35	24.65	37
TOTAL INSTALLMENT CREDIT OUTSTANDING AT END OF MONTH (B $)	394.92	399.18	402.47	402.47	1.61	14.42	

ACTIVITY

KENTUCKY DATA

	Jan. 1984	Feb. 1984	March 1984	Qtr. I 1984	% Chg. 83-IV 84-I	% Chg. 83-I 84-I
LABOR FORCE (NOT SEASONALLY ADJUSTED, THOUSANDS)						
LABOR FORCE, TOTAL CIVILIAN	1723.40	1717.00	1723.40	1721.27	1.54	2.06
EMPLOYMENT, TOTAL, BY PLACE OF RESIDENCE	1525.00	1530.50	1549.40	1534.97	-0.13	5.90
EMPLOYMENT, AGRICULTURAL	45.10	47.80	52.60	48.50	-31.27	-2.41
EMPLOYMENT, TOTAL NON-AGRICULTURAL	1479.90	1482.70	1496.80	1486.47	1.37	6.19
UNEMPLOYMENT RATE	11.50	10.90	10.10	10.82	15.89	-23.02
EMPLOYMENT, TOTAL NON-AGRICULTURAL WAGE AND SALARY	1158.90	1158.90	1166.40	1161.40	-1.48	2.85
EMPLOYMENT, BITUMINOUS COAL & LIGNITE MINING (SIC 12)	35.80	35.40	35.90	35.70	0.66	-5.14
EMPLOYMENT, CONTRACT CONSTRUCTION	44.70	45.50	47.60	45.93	-9.22	12.31
EMPLOYMENT, TOTAL MANUFACTURING	249.00	249.40	252.00	250.13	2.07	6.42
EMPLOYMENT, MANUFACTURING, DURABLE	135.10	136.10	138.00	136.40	3.10	11.59
EMPLOYMENT, MANUFACTURING, NON-DURABLE	113.90	113.30	114.00	113.73	0.86	0.83
EMPLOYMENT, TRANSPORTATION, COMMUNICATIONS & PUBLIC UTILITIES	60.60	62.60	62.60	61.93	-4.03	1.47
EMPLOYMENT, WHOLESALE & RETAIL TRADE	269.30	264.10	263.70	265.70	-3.73	4.76
EMPLOYMENT, FINANCE, INSURANCE & REAL ESTATE (SIC 60-67)	53.30	52.90	53.00	53.07	-0.06	2.18
EMPLOYMENT, SERVICES (SIC 70-80)	221.80	222.10	224.40	222.77	-0.64	2.03
EMPLOYMENT, CIVILIAN GOVERNMENT	219.50	221.70	221.90	221.03	-1.44	-1.95
EMPLOYMENT, STATE & LOCAL GOVERNMENT	179.10	181.30	181.50	180.63	-1.49	-2.52
HOURS AND EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING						
AVG WEEKLY HOURS, PROD WORKERS, TOTAL MANUFACTURING	39.20	39.00	39.10	39.10	-1.59	0.60
AVG WEEKLY HOURS, PROD WORKERS, MANUFACTURING DURABLES	40.30	40.40	40.10	40.27	-0.33	4.59
AVG WEEKLY HOURS, PROD WORKERS, NON-DURABLE MANUFACTURING	37.90	37.50	37.90	37.77	-3.00	-3.66
AVG HOURLY EARN, PROD WORKERS, TOTAL MANUFACTURING	9.17	9.16	9.16	9.16	0.88	6.88
AVG HOURLY EARN, PROD WORKERS, MANUFACTURING DURABLES	9.84	9.83	9.87	9.85	1.83	5.71
AVG HOURLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	8.33	8.32	8.27	8.31	0.00	7.46
AVG WEEKLY EARN, PROD WORKERS, TOTAL MANUFACTURING	359.46	357.24	358.16	358.29	-0.73	7.52
AVG WEEKLY EARN, PROD WORKERS, MANUFACTURING DURABLES	396.55	397.13	395.79	396.49	1.48	10.58
AVG WEEKLY EARN, PROD WORKERS, NON-DURABLE MANUFACTURING	315.71	312.00	313.43	313.71	-2.98	3.54
MINING (MILLIONS OF TONS, MILLIONS OF TAX DOLLARS)						
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, EASTERN KY, TOTAL	8.66	9.28	10.66	28.60	10.73	25.54
BITUMINOUS COAL & LIGNITE, PHYSICAL OUTPUT, WESTERN KY, TOTAL	3.50	3.73	3.91	11.15	12.31	19.28
AVG HOURLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	13.70	13.93	14.23	13.95	-1.25	-6.23
AVG WEEKLY EARN, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	511.01	509.84	516.55	512.47	6.62	3.04
AVG WEEKLY HOURS, PROD WORKERS, BITUMINOUS COAL & LIGNITE MINING	37.30	36.60	36.30	36.73	7.93	9.98
TAX RECEIPTS, COAL SEVERANCE, CONSOLIDATED, TOTAL	14.28	14.98	18.36	47.63	*	7.20
HOUSING (MILLIONS OF $, NO. OF PRIVATE RESID. UNITS--NOT SEAS ADJ)						
VALUE OF CONSTRUCTION CONTRACTS, RESIDENTIAL & NON-RES	113.20	106.30	187.60	407.10	-19.72	4.12
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, 1 UNIT	237.00	426.00	721.00	1384.00	17.59	30.20
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, 1 UNIT	13.09	21.96	35.76	70.81	25.59	45.28
HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTHORIZED, TOTAL	570.00	895.00	1590.00	3055.00	49.24	42.56
VALUATION, HOUSING UNITS, PRIVATE STRUCTURES, PERMIT AUTH, TOTAL	18.89	36.85	49.44	105.18	40.24	51.73
NET LOANS MADE & ACQUIRED BY KY. SAVINGS & LOAN ASSOCIATIONS	22.05	36.33	74.39	132.77	-13.16	116.67
RETAIL SALES (MIL $, 000 CARS)						
TAX RECEIPTS, GENERAL FUND, SALES AND GROSS RECEIPTS	86.54	63.08	71.00	220.62	*	8.58
NEW PASSENGER CAR REGISTRATIONS, TOTAL, NOT SEAS. ADJ.	8.64	8.72	9.42	26.78	*	24.51
SELECTED STATE GOVERNMENT RECEIPTS (MIL $)						
TAX AND NONTAX RECEIPTS, GENERAL FUND, TOTAL	256.71	179.88	147.31	583.90	*	8.70
TAX RECEIPTS, GENERAL FUND, SALES & USE TAXES, TOTAL	80.35	53.28	54.88	188.51	*	9.05
TAX RECEIPTS, GENERAL FUND, INCOME TAX, INDIVIDUAL	65.40	69.08	24.89	159.37	*	12.24
TAX RECEIPTS, GENERAL FUND, INCOME TAX, CORPORATION	5.56	5.38	9.66	20.60	*	-10.09
TAX RECEIPTS, STATE ROAD FUND, STATE SHARE	33.12	36.29	35.65	105.05	*	2.35
TAX RECEIPTS, STATE ROAD FUND, MOTOR FUELS TAXES, NORMAL	16.38	13.75	15.28	45.42	*	1.46
TAX RECEIPTS, STATE ROAD FUND, MOTOR VEHICLE USAGE TAX	9.62	11.08	12.28	32.98	*	23.72

PRIVATE SOURCES FOR THE ABOVE DATA INCLUDE:
F. W. DODGE DIVISION (MCGRAW-HILL INFORMATION SYSTEMS COMPANY), VALUE OF CONSTRUCTION CONTRACTS;
R. L. POLK & COMPANY, NEW CAR REGISTRATIONS (NA FOR OCT. '83)

NOTE: THE DATA ON PERMIT-AUTHORIZED CONSTRUCTION COME FROM THE BUREAU OF THE CENSUS, U.S. DEPARTMENT OF COMMERCE AND REPRESENT THE KENTUCKY PORTION OF THE NATIONAL SURVEY OF 16,000 PERMIT-ISSUING PLACES.

* = QUARTER TO QUARTER COMPARISONS NOT MEANINGFUL DUE TO SEASONAL VARIATION

(continued from page 9)

residents in a county. Since income is usually skewed in its distribution, median income measures are frequently reported in conjunction with mean incomes.

Median family money income is the middle money income level for all the families in a county and does not include money income of unrelated persons in non-family households. Half the families report more than this amount and half report less. Therefore, it is a descriptive measure which is not as influenced by changes concentrated among those with extremely low or high levels of income. If a million dollar increase in income were concentrated among a few people, median family income would not change because the half-way point, based upon the number of families rather than on levels of income, would still be the same. However, if that same million dollars were spread widely among residents, median family income would increase. Thus growth measured using per capita personal income illustrates aggregate increases in total income in counties regardless of how broadly they are distributed among families, and median family income gives some indication of how broadly those increases were shared. It is also important to bear in mind that not only is one income measure a mean and the other a median; the definition of "income" and the measurement (person and family) differ as described.

Per capita personal income in 1980 in rural Kentucky counties was $6,054, but the figures ranged from $3,827 in Owsley County to $9,486 in Franklin County. Median family income was $13,685 overall in rural Kentucky, ranging from $7,170 in Owsley to $19,923 in Franklin. On both measures the differences between economic bases are significant, both substantively and statistically.[10]

As Table 3 shows, income was lowest in counties dependent upon agriculture, at a per capita personal income level of $5,328 in 1980. In coal counties it was 15.1 percent higher, at $6,133. Manufacturing counties were 20 percent higher, with $6,389. The ranking is the same using median family money income, but in this case coal county income was only 6.4 percent higher than farm county income, while it was still 18.3 percent higher in manufacturing counties. The fact that coal counties are closer to the other non-agricultural based counties on per capita personal income than they are on median family money income suggests that income is less evenly distributed among residents in coal counties.

This skewed income distribution in coal counties is also reflected in the proportion of low income families. Poverty measures are notoriously difficult for analysts to use accurately because the condition of poverty is not uniformly captured by an arbitrary cut-off in income levels. While some researchers have developed constructive measures which better tap the depth and complexity of the concept, these are not readily applicable to Census data available for counties.[11] Even though coal counties have higher income levels overall than farm based counties, both groups have 30 percent low income families. Manufacturing and government-mixed counties have smaller proportions, with 24 and 25 percent respectively.

The proportion of adults with a high school education in rural Kentucky is low by any standard. The 1980 figure ranged from 25 percent in Jackson County to 67 percent in Hardin. In farm counties only 39 percent of the adults had completed high school; in coal counties only 38 percent had. Thus in 1980 the proportion of adults who are high school graduates in the farming and coal counties is *lower* than the national figure was twenty years earlier. The average for all Kentucky nonmetropolitan counties was raised by the manufacturing and government-mixed industry counties, which had 46 and 48 percent respectively.

TABLE 3

COMPARISON OF CHANGE IN ECONOMIC AND SOCIAL INDICATORS IN RURAL KENTUCKY 1959/60 (T_1) to 1979/80 (T_2)

Social Indicator	Farm Counties (a) (N = 23)			Coal Counties (a) (N = 24)			Manufacturing Counties (a) (N = 39)			Government/ Mixed Counties (a) (N = 17)		
	T_2(b)	T_1(c)	Change	T_2(b)	T_1(c)	Change	T_2(b)	T_1(c)	Change	T_2(b)	T_1(c)	Change
Per Capita Personal Income in Current Dollars	$5,328	$1,035		$6,133	$896		$6,389	$1,245		$6,159	$1,190	
Per Capita Personal Income in Constant 1972 Dollars	$2,976	$1,466	103.0%	$3,426	$1,269	170.0%	$3,569	$1,763	102.4%	$3,441	$1,686	104.1%
Median Family Money Income in Current Dollars	$12,299	$2,513		$13,080	$2,417		$14,546	$3,038		$14,443	$3,147	
Median Family Money Income in Constant 1972 Dollars	$7,569	$3,559	112.6%	$8,049	$3,423	135.1%	$8,951	$4,303	108.0%	$8,888	$4,457	99.4%
Low Income Families (Percent of Total)	30%	58%	-28pts.	30%	60%	-30pts.	24%	51%	-27pts.	25%	49%	-24pts.
Education: Percent Adults 25 Years and Older with High School Education	39%	17%	22pts.	38%	16%	22pts.	46%	23%	23pts.	48%	22%	26pts.
Percent Housing Units with Complete Plumbing	81%	26%	54pts.	83%	28%	55pts.	89%	39%	50pts.	89%	38%	51pts.
Net Migration Rate 1970-80	9%			15%			11%			14%		
Percent Housing Units that are Mobile Homes, 1980	10%			15%			9%			13%		

(a) Economic base criteria are described in the Appendix.
(b) T_2: Time 2 is 1980 for per capita personal income, percent high school graduates, and percent housing units with complete plumbing; 1979 figures for median family money income and percent low income families.
(c) T_1: Time 1 is 1960 for percent high school graduates, and percent housing units with complete plumbing; 1959 figures for per capita personal income, median family money income and percent low income families.
SOURCE: See Note 8. Source for net migration rate and percent of housing units that are mobile homes is the 1980 Census, Summary Tape File 3.

About 86 percent of the housing units in rural Kentucky had complete plumbing facilities in 1980, ranging from 65 percent in Owsley County to 98 percent in McCracken. The differences between economic bases were not quite as dramatic as the differences in education and in low-income families, but are nonetheless statistically significant. Only 81 percent of the housing units in agricultural counties, and only 83 percent in coal counties, were equipped with complete plumbing. Manufacturing and the government-mixed counties both had 89 percent of the housing units with complete plumbing.

These observations suggest that coal counties have more in common with farm counties, which have suffered from stagnating economic activity, than they do with manufacturing or government-mixed counties. But this 1980 snapshot may be sharpened by examining changes over the last twenty years.

Changes in Social and Economic Conditions

When looking at the income levels and selected indicators of social conditions in rural Kentucky in 1980, coal and farm counties consistently lag behind counties in which manufacturing or government or a mixed industrial base dominate the economy. But conditions in farming and coal counties were even worse in 1960. Do their conditions in 1980 represent significant improvement? Has the seventies boom in the coal industry been translated into improved social and economic conditions in 1980?

Using constant 1972 dollars (i.e., controlling for inflation) we can compare conditions and changes in income levels between 1959 and 1980 (see Table 3). In 1959 per capita personal income in Kentucky's rural counties averaged $1,569, and ranged from a low of $766 in Martin County to a high of $2,644 in Franklin County. Compared to coal counties, which had an average per capita personal income of $1,269, farming counties were better off, with an average of $1,466. Four out of the five poorest counties were eastern coal counties (Martin, Magoffin, McCreary and Knott), and one was a farming county (Menifee). The manufacturing and government-mixed counties ranked highest in that decade as well, with average per capita incomes of $1,763 and $1,686.

Growth in per capita personal income between 1959 and 1980 varied widely according to economic base. The average change in nonmetropolitan Kentucky counties was 116 percent. Coal counties had a remarkable growth of 170 percent, while manufacturing counties grew only 102 percent, farming 103 percent, and the government-mixed counties 104 percent. Three of the biggest growth counties were western coal counties: Webster, Hopkins and Muhlenberg.

TABLE 4
CHANGE IN PER CAPITA PERSONAL INCOME RANK: RURAL KENTUCKY, 1959-80

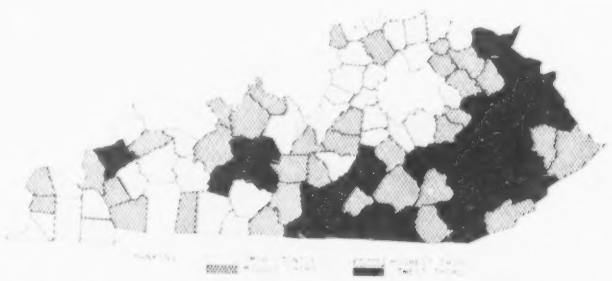
		Improved Ranking		Same Ranking		Lower Ranking	
Economic Base	N	N	%	N	%	N	%
Farm Counties	23	0	0	18	25	5	29
Coal Counties	24	9	60	15	21	0	0
Manufacturing Counties	39	4	27	29	41	6	35
Govt.-Mixed Counties	17	2	13	9	13	6	35
Total	103	15	100	71	100	17	99

SOURCE: Bureau of Economic Analysis (BEA), U.S. Department of Commerce, through the Kentucky Economic Information System (KEIS).

When the rural Kentucky counties are separated into three groups according to whether they improved, stayed the same, or declined in their relative ranking on per capita personal income, as in Table 4, the distribution of these changes across economic base categories can be evaluated. Figures 2 and 3 shade the counties according to whether they ranked in the top, middle, or lower third of all rural Kentucky counties on the basis of per capita personal income in 1959 and 1980. As shown, 15 counties improved their rankings (approximately 15 percent), while the majority—71—remained relatively the same; 17 (approximately 17 percent) declined in this sense. While none of the farm-base counties improved, 9 of the coal counties did (38 percent of all coal counties). Four manufacturing counties (10 percent of all manufacturing counties) and 2 government-mixed counties (12 percent of this group) improved. Sixty percent of all the counties that experienced relative improvement were coal based.

Figure 2

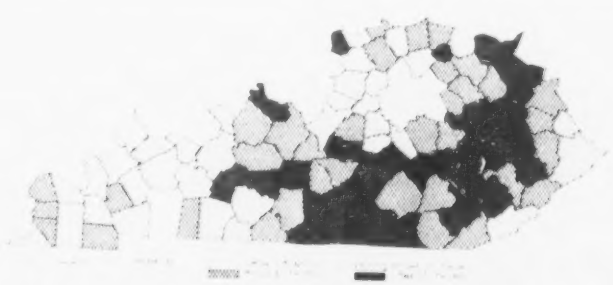
PER CAPITA PERSONAL INCOME RANKINGS, 1959



Three-fourths of the farming counties maintained the same ranking over the twenty-year period, two-thirds of the coal counties stayed the same, three-fourths of the manufacturing counties stayed in the same ranking, and about half the government-mixed industry counties stayed the same. None of the coal counties declined in ranking, but 22 percent of the farm counties (5 counties) declined; 15 percent of the manufacturing counties (6 counties), and 35 percent of the government-mixed counties (6 counties) declined.

Figure 3

PER CAPITA PERSONAL INCOME RANKINGS, 1980



Referring again to Table 3, median family money income in 1959, measured in constant dollars, was $3,957 in the rural counties, but farm counties only had $3,559 and coal counties $3,423, compared to $4,303 in manufacturing counties, and $4,457 in government-mixed industry counties. The big-

gest change over the twenty-year period occurred in coal counties, with an average improvement of 135 percent, compared to 113 percent in farming counties, 108 percent in manufacturing counties, and 99 percent in government-mixed industry counties. Again, the differences between per capita personal income and median family money income are important. While improvements in median family money income were proportionate to improvements in per capita personal income in farming, manufacturing and government-mixed counties, that was not the case in coal counties. Per capita personal income in coal counties increased 170 percent (in constant dollars), but median family income increased only 135 percent. These differences suggest that some of the increase in income was not widely distributed.

In 1959 the proportion of low income families in rural Kentucky counties ranged widely from 22 percent in Franklin County to 81 percent in Wolfe and Owsley counties. There are significant differences between the averages in the four economic base categories: 58 percent of the families in farming counties had low incomes, compared to 60 percent in coal counties, 51 percent in manufacturing counties, and 49 percent in government-mixed counties.

It is interesting that the changes in the proportion of low income families between 1959 and 1979 were within a few points of each other across the different bases, even though the change in per capita personal income was so much greater in coal counties. All of these patterns suggest that the benefits of economic growth in coal counties were concentrated in a small sector of the population rather than broadly distributed. However, these differences could mean that the patterns described thus far reflect increases in non-wage or non-monetary forms of income for residents of coal counties. A number of statistics suggest that coal county income growth was in wages.

First, the percent of total personal income that is from transfer payments rose more in farm, manufacturing and government-mixed base counties than it did in coal counties. Second, the percent of all income that is from earnings of labor and proprietors declined throughout rural Kentucky but declined more in farm, manufacturing and government-mixed counties than it did in coal counties, 1959-80. Finally, the 1980 average earnings per worker in coal counties were $14,725, compared to $10,389 in government-mixed rural counties, $9,968 in manufacturing rural counties, and $7,173 in farm counties. These figures support the hypothesis that the increase in per capita personal income in coal counties is the result of increases in earned income rather than increases in other forms of income.[12]

As mentioned above, in 1960 the average proportion of high school graduates in nonmetropolitan Kentucky counties was 20 percent, ranging from 9 percent in Jackson and McCreary counties to 47 percent in Meade County. Farming and coal counties lagged behind other rural counties then, with figures of 17 and 16 percent, compared to manufacturing and government-mixed counties' 23 and 22 percent.

Changes in the proportion of residents with a high school education are not as great as changes in the other indicators examined here. In fact, rural Kentucky improved less than the nation did, 1960-80, and so lost ground relatively. Farm and coal counties retained their relative disadvantage compared to counties in the other two sectors. Farm and coal counties had an average increase of 22 percentage points on the education indicator, while manufacturing and government-mixed counties improved an average of 23 and 26 points. The average increase for all the nonmetropolitan counties was 23 points, with the least change occurring in the eastern counties of Magoffin, Cumberland, Morgan, Jackson, and Clay, and the greatest degree of improvement in the western counties of Lyon, Hancock, Trigg, Livingston and Calloway. Although there was some variation among the county groups in net migration rates, the newcomers do not appear to have influenced the overall education levels in the counties very much.

Rural counties in Kentucky have just about caught up with the rest of the nation in the extent to which houses have complete plumbing. Even in 1960, 85 percent of the nation's housing units were equipped with complete plumbing, while in rural Kentucky only 33 percent were. Farming and coal counties had only 26 and 28 percent housing units with plumbing, while manufacturing and government-mixed rural counties had 39 and 38 percent. Farming and coal counties improved the most from 1960-80—those with the least plumbing made greater gains. Farming counties improved 54 percentage points, coal counties an average 55 points. Manufacturing and government-mixed counties were not too far behind, with improvements of 50 and 51 points respectively. Those that improved the most were western counties with the one exception of Martin County. The net migration rate in Martin County between 1970 and 1980 was 33 percent; mobile homes made up 24 percent of the county's housing units in 1980. To some extent the large improvement in Martin County's plumbing situation reflects the influx of mobile homes which come with plumbing.

Conclusion

Economic growth between 1959 and 1980 was greater in rural Kentucky counties than in the nation overall, reflecting the general shift in the national economy to the southern region and to nonmetropolitan areas.[13] The proportion of low-income families dropped by 28 points in rural Kentucky, compared to 7 points nationally, and the proportion of housing units with plumbing increased by 53 points, compared to a change of 13 points in the nation. Rural Kentucky still had almost twice the proportion of low-income families as the U.S. as a whole in 1980, but the gap has decreased. Similarly, the gap between rural Kentucky and the nation has narrowed in the proportion of houses with complete plumbing. Significantly, rural Kentucky has dropped further *behind* the nation in educational attainment, despite the greater income gains.

As shown, conditions vary according to the dominant economic base in the rural counties. Manufacturing base counties and government-mixed industry counties have had higher incomes than the primary industry based farming and coal counties, and these income advantages carried over into better social conditions in 1980. There are proportionally more low-income families in farming and coal counties, relatively fewer adults with a high school education, and relatively fewer

houses with complete plumbing. This scenario fits conventional theories in which secondary and tertiary industries such as manufacturing, trade and services are associated with better economic conditions than the primary production sectors of agriculture and mining.[14]

However, it is the *change* over the last two decades which has important implications for dealing with chronic poverty in Kentucky. Coal counties' income levels grew at a much faster rate than the other types of counties, but social improvements in coal counties did not occur at a much faster pace than in farm counties, even though the farm sector declined relatively over the last twenty years.

Of course, improvements in social conditions require long-term investments of community resources. It is possible that these improvements are underway, and that continued economic growth in coal counties would contribute to further improvements. However, the volatility of the coal industry has made economic development in the coalfields tenuous even when there has been economic growth. Twenty years ago Bowman and Haynes observed that eastern Kentucky coal counties made greater income gains than noncoal counties between 1939 and 1950, but then lost much of that advantage when the postwar decline hit the industry.[15] The data discussed here represent measures of conditions up to 1980; in the three years since, coal production and income have declined. Production in Kentucky was down from 150.1 million tons in 1980 to 136.2 million tons in 1983, and unemployment in the coalfields was as high as 23 percent in some places in the last year. Analysts predict increased demand for Kentucky coal over the long term, but the lack of stability in markets is likely to persist.

Beyond the transitory nature of income gains in coal counties, the unequal distribution of the benefits of economic growth appears to be an obstacle to potential economic development. Coal counties almost caught up with manufacturing counties in per capita personal income, but the fact that median family money income and poverty levels did not improve in tandem suggests that a whole segment of the population in coal counties did not benefit. Poverty persists, and although educational levels have improved in nonmetropolitan Kentucky, the region still lags behind the nation. Evidence from experience in third world countries, as well as in urban areas in the U.S., is that development itself is a process of redistribution. Economic growth must be harnassed deliberately and rechanneled if it is to contribute to reducing poverty and improving the quality of life for all residents.

Among the questions raised by this preliminary look at changes in economic and social conditions in rural Kentucky is whether counties dependent upon a single, volatile, resource-extractive industry can turn their income gains into lasting economic development. It is a critical question for the persistently poor counties in the eastern Kentucky region where the coal industry provides the economic base; but it is also important to the state as a whole. Coal is a vital industry in Kentucky, and the state works hard to promote it in regional, national and international markets. Kentucky policymakers and citizens expect jobs and income in the coal industry to contribute to economic development. If increased jobs and incomes do not automatically result in improved conditions, then we may have to look for policy measures that can make coal activity developmental.

ACKNOWLEDGMENTS

The study on which this paper is based was funded by the Mountain Association for Community Economic Development (MACED) with a grant from the Ford Foundation. The author appreciates critical comments from Margaret Adams, William Duncan, Thomas Ford, and Ann Tickamyer, and assistance from staff at MACED, the U.K. Computer Center, and the U.K. Center for Business and Economic Research.

Notes

[1]"Rural" and "nonmetropolitan" are used interchangeably in the text, but the reference is to nonmetropolitan counties. Although data from three different decades are discussed, the nonmetropolitan status of counties in 1980 is applied for the entire period. That is, a county designated as metropolitan in 1980 by the federal Office of Management and Budget is included as metropolitan in 1960 for the purposes of this analysis. The 17 metropolitan counties in Kentucky in 1980 are Boone, Bourbon, Boyd, Bullitt, Campbell, Christian, Clark, Daviess, Fayette, Greenup, Henderson, Jefferson, Jessamine, Kenton, Oldham, Scott and Woodford. In the maps accompanying this article, the metropolitan counties (i.e., SMSAs) are shown as blank.

[2]See Mary J. Bowman and Warren W. Haynes, *Resources and People in East Kentucky: Problems and Potentials of a Lagging Economy* (Baltimore: The Johns Hopkins Press, 1963), and Thomas F. Davis, *Persistent Low-Income Counties in Nonmetro America*, Rural Development Research Report No. 12 (Washington, D.C.: U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, May, 1979).

[3]Monroe Newman, *The Political Economy of Appalachia* (Lexington, Ma.: D.C. Heath & Co., 1972), p. 50. The Kentucky Appalachian region includes 46 nonmetropolitan Kentucky counties which were designated as "Appalachian" by the Appalachian Regional Commission in the late 1960s. These are Adair, Bath, Bell, Breathitt, Carter, Casey, Clay, Clinton, Cumberland, Elliott, Estill, Fleming, Floyd, Garrard, Green, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, McCreary, Madison, Martin, Menifee, Monroe, Montgomery, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Wayne, Whitley, and Wolfe. There are three Kentucky metropolitan counties in the ARC definition of Appalachia.

[4]Newman, *loc. cit.*

[5]James P. Grant, "Development: The End of Trickle-Down?," *Foreign Policy*, No. 12, Fall 1973, pp. 43-65; Hollis Chenery *et al, Redistribution with Growth*, published for the World Bank and the Institute of Development Studies, University of Sussex (London: Oxford University Press, 1974); Robert L. Ayres, *Banking on the Poor: The World Bank and World Poverty* (Cambridge, Ma.: The MIT Press, 1983); Irma Adelman and Cynthia Taft Morris, *Economic Growth and Social Equity in Developing Countries* (Stanford, Ca.: Stanford University Press, 1973); Larry C. Ledebur, *Issues in the Economic Development of Nonmetropolitan U.S.* (Washington, D.C.: Economic Development Administration, 1977).

[6]Personal income statistics are from the Bureau of Economic Analysis, U.S. Department of Commerce (BEA), released in April 1983, and pulled from the Kentucky Economic Information System (KEIS). BEA estimates county-level data for selected years until 1965; after then estimates have been made for each year. BEA statistics for 1959 are definitionally comparable to the 1980 statistics. Some data are not reported for counties in which the sector is so small that data would disclose information about specific businesses. Therefore, the summary statistics used in this analysis are not based on all 103 nonmetropolitan counties at all times. However, nondisclosed data represent such a small portion of any sector or economy that their exclusion is not serious. Total labor and proprietors' income by place of work is a major component of total personal income (a residence-based measure).

[7]Richard Lonsdale and H.L. Seyler (eds.), *Nonmetropolitan Industrialization* (Washington, D.C.: V.H. Winston, 1979).

[8]PER CAPITA PERSONAL INCOME 1980 and 1959 is calculated by the Bureau of Economic Analysis (BEA). Per capita personal income is the total personal income of residents in a county divided by the total population of the county. It includes current income received by persons from all

sources, minus their contributions to social insurance, and *includes* transfer payments, nonmonetary types of income (estimated rental value to owner-occupants of their homes, value of services furnished without payment, and food and fuel produced and consumed on farms), and residence adjustment. The BEA estimates are derived from administrative records, including those from the Unemployment Insurance Program and the Internal Revenue Service.

MEDIAN FAMILY MONEY INCOME for 1979 is taken from Summary Tape File 3 of the 1980 Census of Population and Housing produced by the Bureau of the Census. The 1959 figure is from the *County and City Data Book, 1967*, and originally from the 1960 Census of Population and Housing. The author used a Department of Sociology (University of Kentucky) extract for the 1960 Census data (created by Lawrence Busch, Cornelia Morgan and Carolyn Sachs). Money income includes total money income, as reported on the decennial Census questionnaire, received in calendar year 1979 (or 1959) by all family members 15 years and older. It is tabulated for all families. Total income is the sum of amounts reported separately for income from wages and salaries; nonfarm and farm self-employment; interest, dividends, and net rental; Social Security; public assistance; and all other sources. Family income differs from household income because it excludes income received by household members not related to the householder, persons living alone, and others in nonfamily households. Median family income figures are based on all families, including those with no income.

PERCENT LOW INCOME FAMILIES is a category which refers to families with money incomes less than $3000 in 1959 and less than $7500 in 1979. When the Consumer Price Index is used to control for inflation, $3000 in 1959 dollars is comparable to $7,463 in 1979 dollars. The Bureau of the Census reports the number of families in each county with money incomes below $3000 in 1959 and with incomes below $7500 in 1979. These numbers were used to calculate percentages which are used here as the indicator "low income families," and as a proxy for "poverty."

EDUCATIONAL ATTAINMENT LEVEL is the percent of the adult population 25 years and older completing high school. 1980 data are from the 1980 Census, Summary Tape File 3; 1960 figures are from the *County and City Data Book, 1967*, and were originally reported in the 1960 Census.

HOUSING UNITS WITH COMPLETE PLUMBING is a measure of the proportion of housing units which have complete plumbing facilities for exclusive use. The 1980 figures are from the 1980 Census, Summary Tape File 3; and the 1960 figures are from the *County and City Data Book, 1967*, originally from the 1960 Census.

[9]These different trends suggest that rural Kentucky either has larger families or a larger proportion of poor, unrelated individuals (not included in statistics on families), or both. In 1960 rural Kentucky lagged behind the state as a whole by $645 (per capita, 1972 dollars), and in 1980 that difference increased to $845 (per capita, 1972 dollars). In 1960 rural Kentucky had per capita personal income that was $1490 less than the national level, but in 1980 that gap had increased to $1916 (both in 1972 dollars). See Table 2.

[10]This study analyzes a population rather than a sample, and therefore significance tests are not appropriate in the strictest sense. Nonetheless, researchers often find them helpful in assessing the importance of differences between groups. The differences in the mean between economic base groups of every indicator reported here were statistically significant at least at the .01 level when F tests were calculated for analysis of variance tables.

[11]See, for example, Lee Rainwater, *What Money Buys: Inequality and the Social Meanings of Income* (New York: Basic Books, 1974).

[12]Transfer payments data and average earnings per worker data are from BEA, through the KEIS.

[13]See Gregory Jackson *et al, Regional Diversity: Growth in the United States, 1960-1990* (Boston, Ma.: Auburn Publishing Co., 1981); James C. Cobb, *The Selling of the South: The Southern Crusade for Industrial Development, 1936-1980* (Baton Rouge: Louisiana State University Press, 1982); Lonsdale and Seyler, *op. cit.*

[14]See Charles P. Kindleberger and Bruce Herrick, *Economic Development*, 3rd ed. (New York: McGraw Hill, 1977).

[15]Bowman and Haynes, *op. cit.*

APPENDIX

Economic Base Categories

Counties are categorized into particular economic bases according to the distribution of total labor and proprietors' income by place of work in 1980. The organization of the counties by economic base reflects their contemporary economic base, and does not represent the categorization of counties by economic base that would result if 1959 data were used. Similarly, the analysis does not consider changes that may have occurred in the economic bases over the twenty-year period. Decisions about the criteria were made on the basis of several considerations. Consistent with economic base theory, only those industrial sectors that clearly export goods or services are included as relevant for analyzing the economic base of counties. See Charles M. Tiebout, *The Community Economic Base Study*, Supplementary Paper No. 16, Committee for Economic Development (New York, December 1962).

In this analysis of rural Kentucky, the basic industries have been defined as the goods-producing sectors of farming, mining, and manufacturing, and the service-producing sector of government. Although non-government service-producing sectors (such as retail and wholesale trade, financial and real estate services, etc.) provide about one third of all labor and proprietors' income in rural Kentucky, these sectors have not been considered key to economic growth because they usually serve internal markets and circulate money within the county rather than bringing in money from outside the area of analysis. (While this assumption may no longer hold for urban areas, it is probably still valid for rural areas.)

FARM counties are those in which 20 percent or more of all labor and proprietors' income came from agriculture in 1980. The average proportion of farm income within this group is 27 percent, while the average contribution of farm income to total labor and proprietors' income over all the nonmetropolitan counties is 5.6 percent. The 23 farm counties are Adair, Bath, Bracken, Breckenridge, Butler, Edmonson, Fleming, Garrard, Green, Hart, Henry, Jackson, Larue, Lincoln, Menifee, Metcalfe, Owen, Owsley, Robertson, Rockcastle, Spencer, Trimble, and Washington.

COAL counties are those in which 20 percent or more of all labor and proprietors' income in 1980 came from the mining sector. There are three exceptions to this criterion. Livingston County has 21 percent of its income from mining, but the mining is in limestone rather than coal mining; therefore, for the purposes of this analysis, Livingston County is not included in the mining group. Whitley County has only 17 percent of its income from mining, but over 1 million tons of coal were mined in the county in 1980, and mining represents the biggest sector even though it does not meet the 20 percent criterion; it is assigned to the coal group. Knox County also produces over 1 million tons of coal, and it does not meet the cut-off criteria for any sector; therefore, it is placed in the coal group. Two counties which produce over a million tons of coal also meet other sectors' criteria and therefore are allocated to those other sectors: Butler to farming and Laurel to manufacturing. Among the coal counties, the average proportion of income from mining is 44 percent, while for all nonmetropolitan counties the average is 17 percent. The 24 coal counties are Bell, Breathitt, Clay, Elliott, Floyd, Harlan, Hopkins, Johnson, Knott, Knox, Lee, Leslie, Letcher, McCreary, Magoffin, Martin, Morgan, Muhlenberg, Ohio, Perry, Pike, Union, Webster, and Whitley.

MANUFACTURING makes up a larger proportion of rural Kentucky's labor and proprietors' income overall, so the criterion for determining that manufacturing is the dominant industry is 25 percent of the total. The average for all nonmetropolitan counties is 20 percent, and the sector is more broadly distributed across counties than coal or agriculture. Within the manufacturing group, the percent of labor and proprietors' income from manufacturing is 36 percent. The 39 manufacturing counties are Allen, Anderson, Ballard, Barren, Boyle, Caldwell, Carroll, Casey, Clinton, Crittenden, Cumberland, Fulton, Graves, Grayson, Hancock, Harrison, Hickman, Laurel, Lewis, Logan, McLean, Madison, Marshall, Mason, Meade, Mercer, Monroe, Montgomery, Nelson, Nicholas, Pendleton, Pulaski, Shelby, Simpson, Taylor, Todd, Trigg, Warren, and Wayne.

GOVERNMENT-MIXED INDUSTRY is a residual category which includes those counties which do not meet the criteria for farm, coal, or manufacturing. In some cases the largest proportion of labor and proprietors' income is from the government sector (e.g., in Franklin and Lyon), and in other cases there is a mix of industrial sectors without any one sector meeting the criteria for farm, manufacturing or coal (e.g., Calloway and Carter). In at least one other case there is little reported labor and proprietors' income by sector (e.g., Wolfe). In this group, government makes up 24 percent of all labor and proprietors' income and manufacturing makes up 16 percent. Government makes up 18.2 percent of income in all 103 rural counties, and, as mentioned above, manufacturing makes up 20 percent. The 17 counties in the government-mixed category are Calloway, Carlisle, Carter, Estill, Franklin, Gallatin, Grant, Hardin, Lawrence, Livingston, Lyon, McCracken, Marion, Powell, Rowan, Russell and Wolfe.

(continued from page 1)

ment through May. These data correspond to the rebound in personal consumption expenditures that has been fueling the national recovery in the second quarter. Similarly, Kentucky motor vehicle usage tax receipts were up almost 19 percent through May, reflecting an almost 25 percent increase in new car registrations through April. Cumulative individual and corporate income tax receipts through May also reflected growth in the Kentucky economy; they were running 7.9 and 8.2 percent, respectively, above last fiscal year.

Overall, the somewhat conflicting economic indicators: the demonstrated strength of the national economy continuing into the second quarter of 1984, despite the increases in interest rates; the adjustments in monetary policy exercised by Federal Reserve Chairman Volcker; and external factors such as weather conditions and political unrest in the Middle East and Central America, combine to present a somewhat cloudy picture of the national economy. It has performed better than earlier forecasts had predicted and the growth rate has exceeded past patterns. Nonetheless, the above factors suggest a more modest rate of growth for the remainder of 1984.

In other words, it is doubtful that the robust recovery of the first months of 1984 can be sustained. Rather, a return to a more moderate national growth rate of 4 to 5 percent for the year is indicated, with the full effect of the recent monetary controls not in evidence until the end of 1984 and the beginning of 1985. For the Kentucky economy, the tax picture described above, as well as the labor force estimates, indicate that the Commonwealth has begun to follow the national recovery, a pattern that should continue through the rest of 1984.

(continued from page 7)

- the emergence of the General Assembly as a full partner, with the Governor, in the budget process;
- the proliferation of participant players in the budget process, particularly interest groups;
- the increased attention focused on the budget by the media, especially coverage by Kentucky Educational Television;
- the significantly enhanced role of the Judicial Branch in shaping budget policy and procedure; and
- the transformation of the state budget from basically a management tool and fiscal control mechanism to the primary vehicle for policy and political agenda setting in state government.

Finally, as enactment of the 1984-86 state budget clearly demonstrated, the budget problems facing the Commonwealth are essentially political problems. Technically, there are no obstacles to addressing squarely the state's fiscal plight; these matters simply remain questions of political decision making.

Note: All quantitative data, statistics, and financial information in this paper were drawn from Governor's Office for Policy and Management internal reports or documents published by the Commonwealth of Kentucky. Principal sources included Kentucky Executive Budgets (biennial), Kentucky Budgets of the Commonwealth (biennial), and Kentucky Financial Reports (annual).

Acknowledgments

The author wishes to thank several colleagues, including Roger Burge, Sandra Gubser, Bill Hintze, Paula Moore-Carson, Ed Sergent, and Bob Shimer, from the Governor's Office for Policy and Management, for their comments and suggestions on earlier drafts of this paper. Any opinions, and/or conclusions contained in this paper are the author's alone and in no way reflect the position or policy of the Governor's Office for Policy and Management.

Commuting in Kentucky*

One out of every five Kentucky workers held a job outside of his or her county of residence in 1980. These data, based upon the 1980 Census of Population, are among the statistics included in *Commuting in Kentucky*, published recently by the Kentucky Department of Economic Development. Included in this publication are data on the number of workers, 16 years and older, who commute into and out of each Kentucky county, by county of origin and destination, including to or from adjoining states. Additional tables show the number of workers in each county who drive alone to work, participate in carpools, use public transportation, walk to work, or work at home.

A section on interstate commuting shows that approximately 71,900 Kentuckians commuted to jobs outside the state, while about 69,980 workers from adjoining states commuted to jobs in Kentucky. Nearly two-thirds of the out-commuters travelled to Ohio, while Indiana, followed by Tennessee and then Ohio, furnished most of the in-commuters.

Copies of this publication may be obtained from the Kentucky Department of Economic Development, Maps and Publications Office, 133 Holmes Street, Frankfort, Kentucky 40601. The cost is $4.00 per copy, plus $0.20 sales tax if delivery is within Kentucky.

** The above information was prepared by Ronald Morgan, Branch Manager, Division of Research, Kentucky Department of Economic Development.*

(continued from page 2)

The Bureau of Economic Analysis, U.S. Department of Commerce, has recently issued its annual release of county-level personal income and employment estimates. At this time, data for 1982 have been issued for the first time, and data for 1980 and 1981 have been revised. These data represent 128 time series for each county and have been stored in the county database, the CBANK, of the Kentucky Economic Information System. There has been some redefinition of series in the transfer payments section, as well as some reorganization of the series. Users should therefore run a new CBANK Index before proceeding to access these data. For further information, please call the KEIS Manager, (606) 257-7675.

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SELECTED ECONOMIC AND SOCIAL INDICATORS: KENTUCKY AND THE U.S.

Item	Kentucky's Rank in U.S.	Kentucky	U.S.
*Total population, 1980	23rd	3,660,777	226,545,805
Land area, 1980	37th	39,669 sq.mi.	3,539,295 sq.mi.
Population per square mile, 1980	23rd	92.3	64.0
*Percent change in population, 1970-1980	25th	13.7%	11.4%
Median age, 1980	34th	29.1 years	30.0 years
*Population 65 years old and over, 1980	26th	11.2% of population	11.3% of population
*Non-White population, 1980	33rd	7.7% of population	16.9% of population
Black population, 1980	23rd	7.1% of population	11.7% of population
Asian and Pacific Islander, 1980	39th	0.3% of population	1.5% of population
American Indian, Eskimo, and Aleut, 1980	39th	0.1% of population	0.6% of population
Spanish population, 1980	43rd	0.7% of population	6.4% of population
Metropolitan population, 1980	36th	44.5% of population	74.7% of population
Persons living in different State in 1975 (5 years old+), 1980	34th	9.0% of population	9.7% of population
*Birth rate, 1979[1]	19th	16.7	15.9
*Death rate, 1979[1]	17th	8.9	8.5
Marriage rate, 1980[1]	32nd	9.7	10.9
Divorce rate, 1980[1]	29th	4.8	5.3
Legal abortions per 1,000 live births, 1980	41st	215	428
Physicians per 100,000 population, 1980	39th	133	185
Hospital beds per 100,000 population, 1980	39th	513	602
Personal health care expenditures per capita, 1978	49th	$542	$745
Total housing units, 1980	23rd	1,369,125	88,411,263
Year-round housing units, 1980			
Built between 1970 and 1980	26th	28.7%	26.2%
Prior to 1940	24th	24.7%	25.8%
With 5 or more units in structure	37th	10.1%	17.5%
With air conditioning	22nd	61.7%	55.0%
Homeownership rate, 1980	15th	70.0%	64.4%
Median value of specified owner-occupied housing units, 1980	47th	$34,200	$47,200
Median gross rent of specified renter-occupied housing units, 1980	45th	$198	$243
Crime rate, 1981[2]	47th	3,532	5,800
Federal and state prisoners per 100,000 population, 1981	27th	114	153
Public elementary and secondary schools, 1981			
Expenditures per capita	49th	$287	$434
Current expenditures per pupil	46th	$1,569	$2,350
Public school teachers salaries, 1982	30th	$17,200	$19,000
Percent high school graduates (persons 25 years+), 1980	50th	53.1%	66.5%
Undergraduate enrollment in institutions of higher education, 1979	30th	104,014	8,820,657
*Civilian labor force, 1981[3]	23rd	1,662,000	108,670,000
*Unemployment rate, 1981	12th	8.1%	7.6%
Manufacturing employment, 1979			
*Number[4]	23rd	312,022	21,914,754
*Percent of nonagricultural wage and salary employment	22nd	22.5%	22.4%
*Average weekly earnings of production workers in manufacturing, 1981	30th	$309	$318

SELECTED ECONOMIC AND SOCIAL INDICATORS: KENTUCKY AND THE U.S.

Item	Kentucky's Rank in U.S.	Kentucky	U.S.
Median household money income, 1979	45th	$13,965	$16,841
Per capita money income, 1979	44th	$5,978	$7,298
Percent below poverty level, 1979			
Persons	6th	17.6%	12.4%
Children under 18 years	6th	21.6%	16.0%
State and local governments, 1981			
*Expenditures, total	24th	$6.4 bil.	$487.0 bil.
*Expenditures per capita	41st	$1,757	$2,150
*Tax revenues per capita	45th	$788	$1,079
*Debt per capita	13th	$2,042	$1,606
*Federal Government expenditures per capita, 1981	42nd	$1,956	$2,414
Percent of voting-age population casting votes for President, 1980	37th	50.2%	53.2%
*Motor vehicles per 1,000 population 1980	28th	726	713
Means of transportation to work, 1980			
Percent of workers commuting in carpools	13th	22.8%	19.7%
Percent using car, truck, or van	18th	88.1%	84.1%
Motor vehicle traffic fatalities per 100,000 licensed drivers, 1980	16th	40	35
Energy consumption per capita, 1980	17th	371 mil. Btu	334 mil. Btu
Temperature, average annual	15th	56.5° F.	53.2° F.
Precipitation, average annual	10th	46.8 in.	28.8 in.
Farms, 1978			
*Number	4th	109,980	2,478,642
*Land in farms	23rd	15.0 mil. acres	1,029.7 mil acres
*Acreage per farm, 1982	44th	144 acres	433 acres
*Average value of farm land and buildings per acre, 1982	23rd	$996	$788
*Gross farm income, 1981	20th	$3.2 bil.	$161.2 bil.
*Mineral production, value 1980	9th	$4.5 bil.	$143.9 bil.
*Construction contracts, value 1981	14th	$3.4 bil.	$150.2 bil.
*Manufacturing shipments, value 1980	22nd	$28.8 bil.	$1,850.9 bil.
Manufacturing employment, 1980			
Export related[5]	33rd	2.6%	3.6%
Defense related[6]	38th	0.1%	3.6%
Retail sales per capita, 1977	44th	$2,935	$3,291

*Data items that are starred (*) are estimated at least annually and the Kentucky time-series are included in the database of the Kentucky Economic Information System (KEIS); therefore, data for years other than those given above are available for these items.

[1]Per 1,000 resident population

[2]Per 100,000 resident population

[3]Data have been revised recently by the Kentucky Cabinet for Human Resources and indicate that there were 1,669 thousand persons in the Kentucky civilian labor force in 1981. The above figure has been retained for publication here in order to be comparable to the data for the U.S. and to the relative rank of Kentucky in the U.S.

[4]More recently revised data indicate that manufacturing employment in Kentucky in 1979 was 297,158.

[5]Percent of total private sector employment

[6]Percent of all manufacturing employment

SOURCE: These data have been compiled and distributed by the Statistical Compendia Staff, Data User Services Division, Bureau of the Census, U.S. Department of Commerce, 1983.

KENTUCKY ECONOMIC INFORMATION SYSTEM

KENTUCKY COUNTIES IN RANK ORDER

1982 PER CAPITA PERSONAL INCOME, BY PLACE OF RESIDENCE

RANK	COUNTY	VALUES	RANK	COUNTY	VALUES	RANK	COUNTY	VALUES
1	BOURBON	12788.000	41	OLDHAM	8244.000	81	BRECKINRIDGE	6760.000
2	WOODFORD	12213.000	42	OHIO	8214.000	82	OWEN	6743.000
3	FAYETTE	11390.000	43	GREENUP	8211.000	83	LAUREL	6705.000
4	JEFFERSON	11312.000	44	HARDIN	8198.000	84	BUTLER	6669.000
5	FRANKLIN	10980.000	45	LIVINGSTON	8197.000	85	LETCHER	6537.000
6	HOPKINS	10777.000	46	JESSAMINE	8126.000	86	LAWRENCE	6469.000
7	BOYD	10515.000	47	WARREN	8053.000	87	FLEMING	6445.000
8	MCCRACKEN	10452.000	48	GARRARD	8046.000	88	ROBERTSON	6387.000
9	CAMPBELL	10364.000	49	CARLISLE	8000.000	89	ROWAN	6266.000
10	WEBSTER	10364.000	50	MARTIN	7920.000	90	KNOTT	6219.000
11	HENDERSON	10287.000	51	CALLOWAY	7916.000	91	ADAIR	6181.000
12	DAVIESS	10253.000	52	NELSON	7897.000	92	CLAY	6166.000
13	KENTON	10098.000	53	GRANT	7888.000	93	MARION	6163.000
14	SIMPSON	9721.000	54	BARREN	7883.000	94	CUMBERLAND	6153.000
15	MUHLENBERG	9631.000	55	TAYLOR	7882.000	95	LINCOLN	6110.000
16	CARROLL	9409.000	56	JOHNSON	7872.000	96	MONROE	6032.000
17	UNION	9372.000	57	MONTGOMERY	7666.000	97	HART	5973.000
18	CLARK	9316.000	58	LARUE	7642.000	98	POWELL	5948.000
19	BOONE	9273.000	59	ALLEN	7574.000	99	BREATHITT	5852.000
20	SCOTT	9195.000	60	PERRY	7547.000	100	MEADE	5814.000
21	ANDERSON	9095.000	61	PENDLETON	7450.000	101	MAGOFFIN	5642.000
22	SHELBY	8913.000	62	PULASKI	7401.000	102	RUSSELL	5636.000
23	BOYLE	8909.000	63	BELL	7397.000	103	CARTER	5613.000
24	FULTON	8898.000	64	LYON	7374.000	104	LESLIE	5538.000
25	CALDWELL	8842.000	65	HARLAN	7369.000	105	KNOX	5532.000
26	MCLEAN	8799.000	66	TRIMBLE	7329.000	106	MORGAN	5422.000
27	MASON	8747.000	67	MADISON	7281.000	107	WAYNE	5363.000
28	HARRISON	8682.000	68	GREEN	7279.000	108	LEWIS	5343.000
29	TRIGG	8664.000	69	NICHOLAS	7234.000	109	EDMONSON	5330.000
30	CHRISTIAN	8644.000	70	TODD	7229.000	110	LEE	5329.000
31	HANCOCK	8632.000	71	BRACKEN	7185.000	111	WOLFE	5303.000
32	GRAVES	8586.000	72	WHITLEY	7177.000	112	ROCKCASTLE	5245.000
33	LOGAN	8554.000	73	BULLITT	7046.000	113	METCALFE	5237.000
34	MERCER	8371.000	74	FLOYD	6963.000	114	CASEY	5222.000
35	CRITTENDEN	8370.000	75	HICKMAN	6925.000	115	ELLIOTT	5023.000
36	SPENCER	8355.000	76	WASHINGTON	6852.000	116	CLINTON	4927.000
37	HENRY	8353.000	77	BATH	6822.000	117	JACKSON	4818.000
38	BALLARD	8324.000	78	ESTILL	6813.000	118	MENIFEE	4575.000
39	MARSHALL	8305.000	79	GALLATIN	6805.000	119	MCCREARY	4522.000
40	PIKE	8245.000	80	GRAYSON	6803.000	120	OWSLEY	4464.000

SOURCE: U.S. DEPT. COMMERCE, BUREAU OF ECONOMIC ANALYSIS

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